

SCHOTT
glass made of ideas

Optical Glass

Data Sheets



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Glass type

FK

FK5HTi
N-FK5 ¹⁾
N-FK51A ¹⁾
N-FK58

PK

N-PK51 ¹⁾
N-PK52A ¹⁾

PSK

N-PSK3
N-PSK53A

BK

SCHOTT N-BK7®
N-BK7HT
N-BK7HTi
N-BK10
P-BK7 ¹⁾

K

K7
K10
N-K5
N-ZK7
N-ZK7A

BAK

N-BAK1
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N-BAK4
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BAF

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N-BAF52

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N-BALF5

Glass type

SK

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P-SK57 ¹⁾
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KF

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SSK

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N-SSK8

LAK

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N-LAK8
N-LAK9
N-LAK10
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N-LAK14
N-LAK21
N-LAK22
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N-LAK34
P-LAK35 ¹⁾

LLF

LLF1
LLF1HTi

LF

LF5
LF5HTi

Glass type

F

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N-BASF64

LAF

LAFN7
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LASF

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Glass type

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N-SF6HTultra
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¹⁾ Glass suitable for Precision Molding

Explanations

Refractive indices

The refractive indices n are listed for a maximum of 23 wavelengths in the range between 248.2 nm and 2325.4 nm.

Constants of the dispersion formula

From the Sellmeier dispersion formula

$$n^2(\lambda) - 1 = \frac{B_1 \lambda^2}{\lambda^2 - C_1} + \frac{B_2 \lambda^2}{\lambda^2 - C_2} + \frac{B_3 \lambda^2}{\lambda^2 - C_3}$$

the refractive indices for any wavelength within the range from the near UV to 2.3 μm can be calculated with the help of the constants B_1, B_2, B_3 , and C_1, C_2, C_3 .

Constants of the formula dn/dT

The temperature dependence of the refractive index can be calculated using the following formula:

$$\frac{dn_{\text{abs}}(\lambda, T)}{dT} = \frac{n^2(\lambda, T_0) - 1}{2 n(\lambda, T_0)} \left(D_0 + 2 D_1 \Delta T + 3 D_2 \Delta T^2 + \frac{E_0 + 2 E_1 \Delta T}{\lambda^2 - \lambda_{\text{TK}}^2} \right)$$

The constants are valid for a temperature range from -100°C to $+140^\circ\text{C}$ and a wavelength range from 0.365 μm to 1.014 μm . The temperature coefficients in the data sheets are guideline values.

Temperature coefficient of refraction

$\Delta n_{\text{rel}} / \Delta T$ referring to air at normal pressure 1013.3 mbar

$\Delta n_{\text{abs}} / \Delta T$ referring to vacuum

Internal transmittance τ_i

The internal transmittance in the wavelength range between 250 nm and 2500 nm is listed for thickness of 10 and 25 mm. The internal transmittance and color code listed in the data sheet represent median values from several melts of one glass type. For HT and HTultra grade, the internal transmittance in the visible spectrum includes guaranteed minimum values.

Color code

The color code lists the wavelength λ_{80} and λ_5 at which the transmittance is 0.80 and 0.05 at 10 mm thickness. The values are rounded off to 10 nm and denoted by eliminating the first digit. For high index glass types with $nd > 1.83$, the data of the color codes (marked by *) refers to the transmittance values 0.70 and 0.05 (λ_{70} and λ_5).

Relative partial dispersion

The relative partial dispersions P_{xy} and P'_{xy} for the wavelengths x and y are derived from the equations.

$$P_{xy} = \frac{n_x - n_y}{n_F - n_C} \quad \text{und} \quad P'_{xy} = \frac{n_x - n_y}{n_{F'} - n_{C'}}$$

Deviation of the relative partial dispersion from the "normal line" ΔP

The term ΔP_{xy} quantitatively describes a deviation relation of the dispersion from the "normal glasses".

Other characteristics

$\alpha_{-30/+70}$	= The coefficient of thermal expansion in the temperature range between -30°C und $+70^{\circ}\text{C}$ in $10^{-6}/\text{K}$
$\alpha_{20/300}$	= The coefficient of linear thermal expansion in the temperature range between $+20^{\circ}\text{C}$ und $+300^{\circ}\text{C}$ in $10^{-6}/\text{K}$
T_g	= Transformation temperature in $^{\circ}\text{C}$
$T_{10^{13.0}}$	= Temperature of the glass in $^{\circ}\text{C}$ at a viscosity of 10^{13} dPa·s
$T_{10^{7.6}}$	= Temperature of the glass in $^{\circ}\text{C}$ at a viscosity of $10^{7.6}$ dPa·s
c_p	= average specific heat capacity in $\text{J}/(\text{g}\cdot\text{K})$
λ	= Thermal conductivity in $\text{W}/(\text{m}\cdot\text{K})$
AT^*	= Yield point/sag temperature in $^{\circ}\text{C}$
ρ	= Density in g/cm^3
E	= Elasticity modulus in $10^3 \text{ N}/\text{mm}^2$
μ	= Poisson's ratio
K	= Stress optical coefficient in $10^{-6} \text{ mm}^2/\text{N}$
HK	= Knoop hardness
HG	= Grindability class (ISO 12844)
Abrasion Aa*	= Grindability according to JOGIS**
CR	= Climatic resistance Resistance to moisture in the air expressed in CR classes 1 (high) to 4 (low).
FR	= Stain resistance Resistance to stain formation expressed in FR classes 0 (high) to 5 (low).
SR	= Acid resistance Resistance to acid solutions expressed in SR classes 1 (high) to 4 (low) and 51 to 53 (very low).
AR	= Alkali resistance Resistance to alkaline solutions expressed in AR classes 1 (high) to 4 (low).
PR	= Phosphate resistance Resistance to alkaline phosphate containing solutions expressed in PR classes 1 (high) to 4 (low).
SR-J*	= Acid resistance class according to JOGIS**
WR-J*	= Water resistance class according to JOGIS**

* only precision molding glasses

** JOGIS = Japanese Optical Glass Industrial Standards

FK5HTi
487705.245 $n_d = 1.48748$ $v_d = 70.47$ $n_F - n_C = 0.006918$ $n_e = 1.48913$ $v_e = 70.29$ $n_{F'} - n_{C'} = 0.006959$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.46180
$n_{1970.1}$	1970.1	1.46738
$n_{1529.6}$	1529.6	1.47312
$n_{1060.0}$	1060.0	1.47855
n_t	1014.0	1.47912
n_s	852.1	1.48137
n_f	706.5	1.48409
n_C	656.3	1.48534
$n_{C'}$	643.8	1.48568
$n_{632.8}$	632.8	1.48600
n_D	589.3	1.48742
n_d	587.6	1.48748
n_e	546.1	1.48913
n_F	486.1	1.49225
$n_{F'}$	480.0	1.49264
n_g	435.8	1.49591
n_h	404.7	1.49892
n_i	365.0	1.50398
$n_{334.1}$	334.1	1.50935
$n_{312.6}$	312.6	1.51423
$n_{296.7}$	296.7	1.51861
$n_{280.4}$	280.4	1.52409
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.90936218
B_2	0.279077054
B_3	0.891813298
C_1	0.00520142470
C_2	0.0158938446
C_3	95.9109448

Constants of Formula for dn/dT	
D_0	-7.47E-06
D_1	1.58E-08
D_2	-1.23E-11
E_0	3.58E-07
E_1	4.03E-10
λ_{TK} [μm]	0.164

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-1.6	-1.2	-0.9	-3.6	-3.3	-3.0
+20/+40	-1.5	-1.1	-0.7	-2.7	-2.4	-2.0
+60/+80	-1.3	-0.8	-0.4	-2.3	-1.8	-1.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.680	0.390
2325	0.830	0.630
1970	0.971	0.930
1530	0.986	0.965
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.995
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.998	0.994
460	0.998	0.995
436	0.998	0.996
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.999	0.997
380	0.998	0.996
370	0.999	0.996
365	0.998	0.996
350	0.998	0.994
334	0.996	0.989
320	0.992	0.979
310	0.983	0.958
300	0.959	0.900
290	0.900	0.760
280	0.760	0.510
270	0.550	0.220
260	0.300	0.050
250	0.120	0.000

Color Code	
$\lambda_{80} / \lambda_{50}$	29/25
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
i-line glass	

Relative Partial Dispersion	
$P_{s,t}$	0.3253
$P_{C,s}$	0.5742
$P_{d,C}$	0.3098
$P_{e,d}$	0.2388
$P_{g,F}$	0.5288
$P_{t,h}$	0.7315
$P'_{s,t}$	0.3234
$P'_{C',s}$	0.6203
$P'_{d,C'}$	0.2584
$P'_{e,d}$	0.2374
$P'_{g,F'}$	0.4703
$P'_{i,h}$	0.7271

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0202
$\Delta P_{C,s}$	0.0070
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0036
$\Delta P_{i,g}$	0.0321

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.0
T_g [°C]	466
T_{10}^{13} [°C]	469
$T_{10}^{7.6}$ [°C]	672
c_p [J/(g·K)]	0.808
λ [W/(m·K)]	0.925
ρ [g/cm ³]	2.45
E [10^3 N/mm ²]	62
μ	0.232
K [10^{-6} mm ² /N]	2.91
$HK_{0.1/20}$	520
CR	2
FR	1
SR	4
AR	2
PR	2.3

N-FK5
487704.245 $n_d = 1.48749$ $v_d = 70.41$ $n_F - n_C = 0.006924$ $n_e = 1.48914$ $v_e = 70.23$ $n_F' - n_C' = 0.006965$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.46181
$n_{1970.1}$	1970.1	1.46738
$n_{1529.6}$	1529.6	1.47312
$n_{1060.0}$	1060.0	1.47855
n_t	1014.0	1.47912
n_s	852.1	1.48137
n_f	706.5	1.48410
n_C	656.3	1.48535
$n_{C'}$	643.8	1.48569
$n_{632.8}$	632.8	1.48601
n_D	589.3	1.48743
n_d	587.6	1.48749
n_e	546.1	1.48914
n_F	486.1	1.49227
$n_{F'}$	480.0	1.49266
n_g	435.8	1.49593
n_h	404.7	1.49894
n_i	365.0	1.50401
$n_{334.1}$	334.1	1.50939
$n_{312.6}$	312.6	1.51428
$n_{296.7}$	296.7	1.51867
$n_{280.4}$	280.4	1.52415
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.84430934
B_2	0.344147824
B_3	0.910790213
C_1	0.00475111955
C_2	0.0149814849
C_3	97.8600293

Constants of Formula for dn/dT	
D_0	-7.24E-06
D_1	1.58E-08
D_2	-9.51E-12
E_0	3.51E-07
E_1	4.61E-10
λ_{TK} [μm]	0.156

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-1.5	-1.2	-0.9	-3.5	-3.2	-2.9
+20/+40	-1.4	-1.0	-0.6	-2.6	-2.3	-2.0
+60/+80	-1.2	-0.7	-0.3	-2.2	-1.8	-1.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.680	0.380
2325	0.830	0.630
1970	0.971	0.930
1530	0.986	0.965
1060	0.999	0.998
700	0.998	0.995
660	0.996	0.991
620	0.996	0.990
580	0.996	0.991
546	0.996	0.991
500	0.996	0.989
460	0.996	0.990
436	0.997	0.992
420	0.997	0.993
405	0.998	0.994
400	0.998	0.994
390	0.998	0.994
380	0.996	0.991
370	0.997	0.992
365	0.997	0.992
350	0.995	0.988
334	0.991	0.977
320	0.980	0.950
310	0.954	0.890
300	0.900	0.760
290	0.760	0.500
280	0.500	0.180
270	0.220	0.020
260	0.060	0.000
250	0.000	

Color Code	
$\lambda_{80} / \lambda_{50}$	30/26
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.3252
$P_{C,s}$	0.5740
$P_{d,C}$	0.3097
$P_{e,d}$	0.2388
$P_{g,F}$	0.5290
$P_{t,h}$	0.7319
$P'_{s,t}$	0.3232
$P'_{C',s}$	0.6201
$P'_{d,C'}$	0.2584
$P'_{e,d}$	0.2374
$P'_{g,F'}$	0.4704
$P'_{i,h}$	0.7276

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0202
$\Delta P_{C,s}$	0.0070
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0036
$\Delta P_{i,g}$	0.0322

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.0
T_g [°C]	466
T_{10}^{13} [°C]	469
$T_{10}^{7.6}$ [°C]	672
c_p [J/(g·K)]	0.808
λ [W/(m·K)]	0.925
AT [°C]	557
ρ [g/cm ³]	2.45
E [10^3 N/mm ²]	62
μ	0.232
K [10^{-6} mm ² /N]	2.91
HK _{0.1/20}	520
HG	3
Abrasion Aa	109
CR	2
FR	1
SR	4
AR	2
PR	2.3
SR-J	5
WR-J	4

N-FK51A
487845.368

$n_d = 1.48656$

$v_d = 84.47$

$n_F - n_C = 0.005760$

$n_e = 1.48794$

$v_e = 84.07$

$n_F' - n_C' = 0.005804$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.46958
$n_{1970.1}$	1970.1	1.47271
$n_{1529.6}$	1529.6	1.47608
$n_{1060.0}$	1060.0	1.47959
n_t	1014.0	1.47999
n_s	852.1	1.48165
n_f	706.5	1.48379
n_C	656.3	1.48480
$n_{C'}$	643.8	1.48508
$n_{632.8}$	632.8	1.48534
n_D	589.3	1.48651
n_d	587.6	1.48656
n_e	546.1	1.48794
n_F	486.1	1.49056
$n_{F'}$	480.0	1.49088
n_g	435.8	1.49364
n_h	404.7	1.49618
n_i	365.0	1.50046
$n_{334.1}$	334.1	1.50501
$n_{312.6}$	312.6	1.50911
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.97124782
B_2	0.216901417
B_3	0.904651666
C_1	0.00472301995
C_2	0.0153575612
C_3	168.6813300

Constants of Formula for dn/dT	
D_0	-1.83E-05
D_1	-7.89E-09
D_2	-1.63E-12
E_0	3.74E-07
E_1	3.46E-10
λ_{TK} [μm]	0.150

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-4.9	-4.6	-4.3	-6.9	-6.6	-6.4
+20/+40	-6.0	-5.7	-5.3	-7.3	-7.0	-6.7
+60/+80	-6.5	-6.2	-5.8	-7.5	-7.2	-6.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.890	0.750
2325	0.930	0.840
1970	0.996	0.989
1530	0.996	0.990
1060	0.998	0.994
700	0.998	0.995
660	0.998	0.995
620	0.998	0.996
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.997	0.993
436	0.997	0.992
420	0.997	0.992
405	0.997	0.993
400	0.997	0.993
390	0.997	0.992
380	0.995	0.988
370	0.990	0.976
365	0.985	0.963
350	0.950	0.880
334	0.830	0.630
320	0.620	0.300
310	0.430	0.120
300	0.260	0.040
290	0.140	0.010
280	0.060	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/28
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2879
$P_{C,s}$	0.5465
$P_{d,C}$	0.3062
$P_{e,d}$	0.2388
$P_{g,F}$	0.5359
$P_{t,h}$	0.7429
$P'_{s,t}$	0.2858
$P'_{C',s}$	0.5909
$P'_{d,C'}$	0.2554
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4759
$P'_{i,h}$	0.7373

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.1112
$\Delta P_{C,s}$	-0.0533
$\Delta P_{F,e}$	0.0110
$\Delta P_{g,F}$	0.0342
$\Delta P_{i,g}$	0.1675

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	12.7
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	14.8
T_g [°C]	464
T_{10}^{13} [°C]	463
$T_{10}^{7.6}$ [°C]	527
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.760
AT [°C]	503
ρ [g/cm ³]	3.68
E [10^3 N/mm ²]	73
μ	0.302
K [10^{-6} mm ² /N]	0.70
HK _{0.1/20}	345
HG	6
Abrasion Aa	528
CR	1
FR	0
SR	52.3
AR	2.2
PR	4.3
SR-J	3
WR-J	1

N-FK58
456909.365 $n_d = 1.45600$ $v_d = 90.90$ $n_F - n_C = 0.005017$ $n_e = 1.45720$ $v_e = 90.47$ $n_{F'} - n_{C'} = 0.005053$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.44114
$n_{1970.1}$	1970.1	1.44388
$n_{1529.6}$	1529.6	1.44683
$n_{1060.0}$	1060.0	1.44991
n_t	1014.0	1.45026
n_s	852.1	1.45171
n_f	706.5	1.45358
n_C	656.3	1.45446
$n_{C'}$	643.8	1.45471
$n_{632.8}$	632.8	1.45494
n_D	589.3	1.45596
n_d	587.6	1.45600
n_e	546.1	1.45720
n_F	486.1	1.45948
$n_{F'}$	480.0	1.45976
n_g	435.8	1.46216
n_h	404.7	1.46436
n_i	365.0	1.46807
$n_{334.1}$	334.1	1.47199
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.73804271
B_2	0.363371967
B_3	0.989296264
C_1	0.00339065607
C_2	0.0117551189
C_3	212.8421450

Constants of Formula for dn/dT	
D_0	-2.05E-05
D_1	-6.33E-09
D_2	4.13E-11
E_0	3.84E-07
E_1	1.63E-10
λ_{TK} [μm]	0.073

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-5.4	-5.1	-4.8	-7.3	-7.1	-6.8
+20/+40	-6.5	-6.2	-5.9	-7.7	-7.4	-7.2
+60/+80	-6.8	-6.5	-6.2	-7.8	-7.5	-7.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.997	0.993
2325	0.998	0.996
1970	0.999	0.998
1530	0.999	0.998
1060	0.998	0.995
700	0.997	0.993
660	0.997	0.993
620	0.997	0.994
580	0.998	0.994
546	0.998	0.995
500	0.998	0.994
460	0.997	0.992
436	0.996	0.991
420	0.996	0.991
405	0.996	0.991
400	0.996	0.991
390	0.996	0.990
380	0.995	0.987
370	0.992	0.980
365	0.990	0.975
350	0.976	0.940
334	0.930	0.830
320	0.820	0.610
310	0.690	0.400
300	0.530	0.200
290	0.360	0.080
280	0.240	0.030
270	0.150	0.010
260	0.110	0.010
250	0.090	0.000

Color Code	
$\lambda_{80} / \lambda_{50}$	33/--
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
XLD glass	

Relative Partial Dispersion	
$P_{s,t}$	0.2894
$P_{C,s}$	0.5481
$P_{d,C}$	0.3066
$P_{e,d}$	0.2388
$P_{g,F}$	0.5347
$P_{t,h}$	0.7387
$P'_{s,t}$	0.2873
$P'_{C',s}$	0.5927
$P'_{d,C'}$	0.2557
$P'_{e,d}$	0.2371
$P'_{g,F'}$	0.4749
$P'_{i,h}$	0.7334

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.1386
$\Delta P_{C,s}$	-0.0667
$\Delta P_{F,e}$	0.0140
$\Delta P_{g,F}$	0.0438
$\Delta P_{i,g}$	0.2157

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	13.7
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	15.7
T_g [°C]	445
T_{10}^{13} [°C]	448
$T_{10}^{7.6}$ [°C]	508
c_p [J/(g·K)]	0.710
λ [W/(m·K)]	0.760
AT [°C]	475
ρ [g/cm ³]	3.65
E [10^3 N/mm ²]	70
μ	0.301
K [10^{-6} mm ² /N]	0.54
HK _{0.1/20}	372
CR	1
FR	1
SR	52.3
AR	3.3
PR	4.3
SR-J	4
WR-J	1

N-PK51
529770.386

 $n_d = 1.52855$ $v_d = 76.98$ $n_F - n_C = 0.006867$ $n_e = 1.53019$ $v_e = 76.58$ $n_{F'} - n_{C'} = 0.006923$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.50987
$n_{1970.1}$	1970.1	1.51312
$n_{1529.6}$	1529.6	1.51665
$n_{1060.0}$	1060.0	1.52045
n_t	1014.0	1.52089
n_s	852.1	1.52278
n_f	706.5	1.52527
n_C	656.3	1.52646
$n_{C'}$	643.8	1.52680
$n_{632.8}$	632.8	1.52711
n_D	589.3	1.52849
n_d	587.6	1.52855
n_e	546.1	1.53019
n_F	486.1	1.53333
$n_{F'}$	480.0	1.53372
n_g	435.8	1.53704
n_h	404.7	1.54010
n_i	365.0	1.54527
$n_{334.1}$	334.1	1.55079
$n_{312.6}$	312.6	1.55579
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.15610775
B_2	0.153229344
B_3	0.785618966
C_1	0.00585597402
C_2	0.0194072416
C_3	140.5370460

Constants of Formula for dn/dT	
D_0	-1.98E-05
D_1	-6.06E-09
D_2	1.60E-11
E_0	4.16E-07
E_1	5.01E-10
λ_{TK} [μm]	0.134

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-6.0	-5.7	-5.4	-8.1	-7.8	-7.5
+20/+40	-7.1	-6.7	-6.4	-8.4	-8.1	-7.7
+60/+80	-7.5	-7.1	-6.7	-8.6	-8.2	-7.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.920	0.810
2325	0.940	0.860
1970	0.986	0.966
1530	0.994	0.985
1060	0.998	0.994
700	0.997	0.992
660	0.996	0.991
620	0.997	0.992
580	0.998	0.995
546	0.998	0.996
500	0.997	0.993
460	0.995	0.988
436	0.994	0.984
420	0.994	0.984
405	0.994	0.986
400	0.994	0.986
390	0.994	0.984
380	0.989	0.973
370	0.982	0.955
365	0.976	0.940
350	0.930	0.840
334	0.820	0.600
320	0.600	0.280
310	0.400	0.100
300	0.210	0.020
290	0.060	0.000
280	0.010	
270	0.000	
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2750
$P_{C,s}$	0.5360
$P_{d,C}$	0.3046
$P_{e,d}$	0.2387
$P_{g,F}$	0.5401
$P_{t,h}$	0.7535
$P'_{s,t}$	0.2727
$P'_{C',s}$	0.5797
$P'_{d,C'}$	0.2540
$P'_{e,d}$	0.2367
$P'_{g,F'}$	0.4794
$P'_{i,h}$	0.7473

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0991
$\Delta P_{C,s}$	-0.0463
$\Delta P_{F,e}$	0.0088
$\Delta P_{g,F}$	0.0258
$\Delta P_{i,g}$	0.1203

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	12.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	14.1
T_g [°C]	487
T_{10}^{13} [°C]	488
$T_{10}^{7.6}$ [°C]	568
c_p [J/(g·K)]	0.620
λ [W/(m·K)]	0.650
AT [°C]	528
ρ [g/cm ³]	3.86
E [10^3 N/mm ²]	74
μ	0.295
K [10^{-6} mm ² /N]	0.54
HK _{0.1/20}	415
HG	6
Abrasion Aa	592
CR	1
FR	0
SR	52.3
AR	3.3
PR	4.3
SR-J	3
WR-J	1

N-PK52A
497816.370 $n_d = 1.49700$ $v_d = 81.61$ $n_F - n_C = 0.006090$ $n_e = 1.49845$ $v_e = 81.21$ $n_F' - n_C' = 0.006138$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.47966
$n_{1970.1}$	1970.1	1.48279
$n_{1529.6}$	1529.6	1.48616
$n_{1060.0}$	1060.0	1.48971
n_t	1014.0	1.49012
n_s	852.1	1.49184
n_f	706.5	1.49408
n_C	656.3	1.49514
$n_{C'}$	643.8	1.49544
$n_{632.8}$	632.8	1.49571
n_D	589.3	1.49695
n_d	587.6	1.49700
n_e	546.1	1.49845
n_F	486.1	1.50123
$n_{F'}$	480.0	1.50157
n_g	435.8	1.50450
n_h	404.7	1.50720
n_i	365.0	1.51175
$n_{334.1}$	334.1	1.51658
$n_{312.6}$	312.6	1.52096
$n_{296.7}$	296.7	1.52489
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.02960700
B_2	0.188050600
B_3	0.736488165
C_1	0.00516800155
C_2	0.0166658798
C_3	138.9641290

Constants of Formula for dn/dT	
D_0	-1.97E-05
D_1	-5.50E-09
D_2	5.28E-12
E_0	3.60E-07
E_1	2.45E-10
λ_{TK} [μm]	0.172

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-5.7	-5.4	-5.1	-7.7	-7.4	-7.1
+20/+40	-6.7	-6.4	-6.0	-8.0	-7.7	-7.4
+60/+80	-7.1	-6.8	-6.4	-8.1	-7.8	-7.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.987	0.967
2325	0.991	0.978
1970	0.996	0.990
1530	0.998	0.994
1060	0.998	0.994
700	0.997	0.993
660	0.997	0.993
620	0.998	0.995
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.997	0.992
436	0.996	0.990
420	0.996	0.990
405	0.997	0.992
400	0.997	0.992
390	0.997	0.992
380	0.996	0.989
370	0.992	0.980
365	0.988	0.970
350	0.950	0.880
334	0.830	0.630
320	0.620	0.300
310	0.430	0.120
300	0.250	0.040
290	0.120	0.010
280	0.040	
270	0.010	
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	34/28
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding,	

Relative Partial Dispersion	
$P_{s,t}$	0.2819
$P_{C,s}$	0.5417
$P_{d,C}$	0.3055
$P_{e,d}$	0.2388
$P_{g,F}$	0.5377
$P_{t,h}$	0.7470
$P'_{s,t}$	0.2797
$P'_{C',s}$	0.5858
$P'_{d,C'}$	0.2548
$P'_{e,d}$	0.2369
$P'_{g,F'}$	0.4774
$P'_{i,h}$	0.7412

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.1084
$\Delta P_{C,s}$	-0.0514
$\Delta P_{F,e}$	0.0103
$\Delta P_{g,F}$	0.0311
$\Delta P_{i,g}$	0.1497

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	13.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	15.0
T_g [°C]	467
T_{10}^{13} [°C]	467
$T_{10}^{7.6}$ [°C]	538
c_p [J/(g·K)]	0.670
λ [W/(m·K)]	0.730
AT [°C]	520
ρ [g/cm ³]	3.70
E [10^3 N/mm ²]	71
μ	0.298
K [10^{-6} mm ² /N]	0.67
HK _{0.1/20}	355
HG	6
Abrasion Aa	526
CR	1
FR	0
SR	52.3
AR	3.3
PR	4.3
SR-J	4
WR-J	1

N-PSK3
552635.291 $n_d = 1.55232$ $v_d = 63.46$ $n_F - n_C = 0.008704$ $n_e = 1.55440$ $v_e = 63.23$ $n_F' - n_C' = 0.008767$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.52375
$n_{1970.1}$	1970.1	1.52954
$n_{1529.6}$	1529.6	1.53558
$n_{1060.0}$	1060.0	1.54154
n_t	1014.0	1.54218
n_s	852.1	1.54482
n_f	706.5	1.54811
n_C	656.3	1.54965
$n_{C'}$	643.8	1.55008
$n_{632.8}$	632.8	1.55048
n_D	589.3	1.55224
n_d	587.6	1.55232
n_e	546.1	1.55440
n_F	486.1	1.55835
$n_{F'}$	480.0	1.55885
n_g	435.8	1.56302
n_h	404.7	1.56688
n_i	365.0	1.57342
$n_{334.1}$	334.1	1.58041
$n_{312.6}$	312.6	1.58679
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.88727211
B_2	0.489592425
B_3	1.048652960
C_1	0.00469824067
C_2	0.0161818463
C_3	104.3749750

Constants of Formula for dn/dT	
D_0	2.03E-06
D_1	1.19E-08
D_2	2.46E-11
E_0	3.14E-07
E_1	2.45E-10
λ_{TK} [μm]	0.235

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.6	3.1	3.6	0.6	1.0	1.5
+20/+40	2.5	3.0	3.5	1.2	1.6	2.1
+60/+80	2.7	3.2	3.8	1.7	2.2	2.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.650	0.340
2325	0.810	0.590
1970	0.950	0.880
1530	0.991	0.978
1060	0.999	0.997
700	0.998	0.995
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.996	0.990
460	0.995	0.987
436	0.994	0.986
420	0.994	0.986
405	0.995	0.987
400	0.994	0.986
390	0.993	0.983
380	0.991	0.977
370	0.988	0.971
365	0.985	0.964
350	0.967	0.920
334	0.910	0.800
320	0.770	0.520
310	0.580	0.260
300	0.320	0.060
290	0.120	
280	0.030	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	33/28
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.3023
$P_{C,s}$	0.5555
$P_{d,C}$	0.3069
$P_{e,d}$	0.2386
$P_{g,F}$	0.5365
$P_{t,h}$	0.7509
$P'_{s,t}$	0.3001
$P'_{C',s}$	0.6002
$P'_{d,C'}$	0.2559
$P'_{e,d}$	0.2369
$P'_{g,F'}$	0.4767
$P'_{i,h}$	0.7454

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0118
$\Delta P_{C,s}$	0.0047
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0005
$\Delta P_{i,g}$	0.0016

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	599
T_{10}^{13} [°C]	597
$T_{10}^{7.6}$ [°C]	736
c_p [J/(g·K)]	0.682
λ [W/(m·K)]	0.990
ρ [g/cm ³]	2.91
E [10^3 N/mm ²]	84
μ	0.226
K [10^{-6} mm ² /N]	2.48
$HK_{0.1/20}$	630
HG	2
CR	3
FR	0
SR	2.2
AR	2
PR	2

N-PSK53A
618634.357 $n_d = 1.61800$ $v_d = 63.39$ $n_F - n_C = 0.009749$ $n_e = 1.62033$ $v_e = 63.10$ $n_F' - n_C' = 0.009831$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.59015
$n_{1970.1}$	1970.1	1.59528
$n_{1529.6}$	1529.6	1.60073
$n_{1060.0}$	1060.0	1.60641
n_t	1014.0	1.60706
n_s	852.1	1.60979
n_f	706.5	1.61334
n_C	656.3	1.61503
$n_{C'}$	643.8	1.61550
$n_{632.8}$	632.8	1.61595
n_D	589.3	1.61791
n_d	587.6	1.61800
n_e	546.1	1.62033
n_F	486.1	1.62478
$n_{F'}$	480.0	1.62534
n_g	435.8	1.63007
n_h	404.7	1.63445
n_i	365.0	1.64190
$n_{334.1}$	334.1	1.64991
$n_{312.6}$	312.6	1.65724
$n_{296.7}$	296.7	1.66390
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.38121836
B_2	0.196745645
B_3	0.886089205
C_1	0.00706416337
C_2	0.0233251345
C_3	97.4847345

Constants of Formula for dn/dT	
D_0	-9.28E-06
D_1	7.19E-09
D_2	1.45E-12
E_0	4.06E-07
E_1	3.17E-10
λ_{TK} [μm]	0.190

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-2.6	-2.1	-1.6	-4.7	-4.3	-3.8
+20/+40	-2.9	-2.4	-1.8	-4.3	-3.8	-3.3
+60/+80	-2.9	-2.3	-1.8	-4.0	-3.5	-2.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.610	0.290
2325	0.760	0.510
1970	0.920	0.800
1530	0.982	0.956
1060	0.998	0.994
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.998	0.994
546	0.998	0.995
500	0.997	0.992
460	0.994	0.986
436	0.993	0.982
420	0.992	0.979
405	0.988	0.970
400	0.985	0.964
390	0.976	0.940
380	0.959	0.900
370	0.930	0.830
365	0.910	0.780
350	0.780	0.530
334	0.530	0.200
320	0.230	0.030
310	0.060	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2797
$P_{C,s}$	0.5380
$P_{d,C}$	0.3044
$P_{e,d}$	0.2385
$P_{g,F}$	0.5424
$P_{t,h}$	0.7642
$P'_{s,t}$	0.2774
$P'_{C',s}$	0.5816
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4815
$P'_{i,h}$	0.7578

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0279
$\Delta P_{C,s}$	-0.0127
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0052
$\Delta P_{i,g}$	0.0208

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.8
T_g [°C]	606
T_{10}^{13} [°C]	609
$T_{10}^{7.6}$ [°C]	699
c_p [J/(g·K)]	0.590
λ [W/(m·K)]	0.640
AT [°C]	647
ρ [g/cm ³]	3.57
E [10^3 N/mm ²]	76
μ	0.288
K [10^{-6} mm ² /N]	1.16
HK _{0.1/20}	415
HG	6
Abrasion Aa	284
CR	1
FR	1
SR	53.3
AR	2.3
PR	4.3
SR-J	5
WR-J	1

SCHOTT N-BK7®
517642.251 $n_d = 1.51680$ $v_d = 64.17$ $n_F - n_C = 0.008054$ $n_e = 1.51872$ $v_e = 63.96$ $n_{F'} - n_{C'} = 0.008110$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48921
$n_{1970.1}$	1970.1	1.49495
$n_{1529.6}$	1529.6	1.50091
$n_{1060.0}$	1060.0	1.50669
n_t	1014.0	1.50731
n_s	852.1	1.50980
n_f	706.5	1.51289
n_C	656.3	1.51432
$n_{C'}$	643.8	1.51472
$n_{632.8}$	632.8	1.51509
n_D	589.3	1.51673
n_d	587.6	1.51680
n_e	546.1	1.51872
n_F	486.1	1.52238
$n_{F'}$	480.0	1.52283
n_g	435.8	1.52668
n_h	404.7	1.53024
n_i	365.0	1.53627
$n_{334.1}$	334.1	1.54272
$n_{312.6}$	312.6	1.54862
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.03961212
B_2	0.231792344
B_3	1.010469450
C_1	0.00600069867
C_2	0.0200179144
C_3	103.5606530

Constants of Formula for dn/dT	
D_0	1.86E-06
D_1	1.31E-08
D_2	-1.37E-11
E_0	4.34E-07
E_1	6.27E-10
λ_{TK} [μm]	0.170

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	2.9	3.3	0.3	0.8	1.2
+20/+40	2.4	3.0	3.5	1.1	1.6	2.1
+60/+80	2.5	3.1	3.7	1.5	2.1	2.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.670	0.360
2325	0.790	0.560
1970	0.930	0.840
1530	0.992	0.980
1060	0.999	0.997
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.996
500	0.998	0.994
460	0.997	0.993
436	0.997	0.992
420	0.997	0.993
405	0.997	0.993
400	0.997	0.992
390	0.996	0.989
380	0.993	0.983
370	0.991	0.977
365	0.988	0.971
350	0.967	0.920
334	0.910	0.780
320	0.770	0.520
310	0.570	0.250
300	0.290	0.050
290	0.060	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	33/29
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{e,d}$	0.2386
$P_{g,F}$	0.5349
$P_{t,h}$	0.7483
$P'_{s,t}$	0.3076
$P'_{C',s}$	0.6062
$P'_{d,C'}$	0.2566
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4754
$P'_{i,h}$	0.7432

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0035

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.3
T_g [°C]	557
T_{10}^{13} [°C]	557
$T_{10}^{7.6}$ [°C]	719
c_p [J/(g·K)]	0.858
λ [W/(m·K)]	1.114
AT [°C]	609
ρ [g/cm³]	2.51
E [10^3 N/mm²]	82
μ	0.206
K [10^{-6} mm²/N]	2.77
HK _{0.1/20}	610
HG	3
CR	1
FR	0
SR	1
AR	2.3
PR	2.3

N-BK7HT
517642.251 $n_d = 1.51680$ $v_d = 64.17$ $n_F - n_C = 0.008054$ $n_e = 1.51872$ $v_e = 63.96$ $n_F' - n_C' = 0.008110$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48921
$n_{1970.1}$	1970.1	1.49495
$n_{1529.6}$	1529.6	1.50091
$n_{1060.0}$	1060.0	1.50669
n_t	1014.0	1.50731
n_s	852.1	1.50980
n_f	706.5	1.51289
n_C	656.3	1.51432
$n_{C'}$	643.8	1.51472
$n_{632.8}$	632.8	1.51509
n_D	589.3	1.51673
n_d	587.6	1.51680
n_e	546.1	1.51872
n_F	486.1	1.52238
$n_{F'}$	480.0	1.52283
n_g	435.8	1.52668
n_h	404.7	1.53024
n_i	365.0	1.53627
$n_{334.1}$	334.1	1.54272
$n_{312.6}$	312.6	1.54862
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.03961212
B_2	0.231792344
B_3	1.010469450
C_1	0.00600069867
C_2	0.0200179144
C_3	103.5606530

Constants of Formula for dn/dT	
D_0	1.86E-06
D_1	1.31E-08
D_2	-1.37E-11
E_0	4.34E-07
E_1	6.27E-10
λ_{TK} [μm]	0.170

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	2.9	3.3	0.3	0.8	1.2
+20/+40	2.4	3.0	3.5	1.1	1.6	2.1
+60/+80	2.5	3.1	3.7	1.5	2.1	2.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.490
2325	0.850	0.660
1970	0.954	0.890
1530	0.995	0.987
1060	0.999	0.999
700	0.999	0.998
660	0.999	0.997
620	0.999	0.997
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.996
436	0.998	0.996
420	0.998	0.996
405	0.998	0.996
400	0.998	0.996
390	0.998	0.994
380	0.997	0.992
370	0.996	0.989
365	0.994	0.985
350	0.985	0.964
334	0.950	0.880
320	0.820	0.600
310	0.570	0.240
300	0.220	0.020
290	0.040	
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{e,d}$	0.2386
$P_{g,F}$	0.5349
$P_{t,h}$	0.7483
$P'_{s,t}$	0.3076
$P'_{C',s}$	0.6062
$P'_{d,C'}$	0.2566
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4754
$P'_{i,h}$	0.7432

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0035

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.3
T_g [°C]	557
T_{10}^{13} [°C]	557
$T_{10}^{7.6}$ [°C]	719
c_p [J/(g·K)]	0.858
λ [W/(m·K)]	1.114
ρ [g/cm ³]	2.51
E [10^3 N/mm ²]	82
μ	0.206
K [10^{-6} mm ² /N]	2.77
$HK_{0.1/20}$	610
HG	3
CR	1
FR	0
SR	1
AR	2.3
PR	2.3

N-BK7HTi
517642.251

$n_d = 1.51680$

$v_d = 64.17$

$n_F - n_C = 0.008054$

$n_e = 1.51872$

$v_e = 63.96$

$n_F' - n_C' = 0.008110$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48921
$n_{1970.1}$	1970.1	1.49495
$n_{1529.6}$	1529.6	1.50091
$n_{1060.0}$	1060.0	1.50669
n_t	1014.0	1.50731
n_s	852.1	1.50980
n_f	706.5	1.51289
n_C	656.3	1.51432
$n_{C'}$	643.8	1.51472
$n_{632.8}$	632.8	1.51509
n_D	589.3	1.51673
n_d	587.6	1.51680
n_e	546.1	1.51872
n_F	486.1	1.52238
$n_{F'}$	480.0	1.52283
n_g	435.8	1.52668
n_h	404.7	1.53024
n_i	365.0	1.53627
$n_{334.1}$	334.1	1.54272
$n_{312.6}$	312.6	1.54862
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.03961212
B_2	0.231792344
B_3	1.010469450
C_1	0.00600069867
C_2	0.0200179144
C_3	103.5606530

Constants of Formula for dn/dT	
D_0	1.86E-06
D_1	1.31E-08
D_2	-1.37E-11
E_0	4.34E-07
E_1	6.27E-10
λ_{TK} [μm]	0.170

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	2.9	3.3	0.3	0.8	1.2
+20/+40	2.4	3.0	3.5	1.1	1.6	2.1
+60/+80	2.5	3.1	3.7	1.5	2.1	2.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.490
2325	0.850	0.660
1970	0.954	0.890
1530	0.995	0.987
1060	0.999	0.999
700	0.999	0.998
660	0.999	0.997
620	0.999	0.997
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.996
436	0.998	0.996
420	0.998	0.996
405	0.998	0.996
400	0.998	0.996
390	0.998	0.994
380	0.997	0.992
370	0.996	0.989
365	0.994	0.985
350	0.985	0.964
334	0.950	0.880
320	0.820	0.600
310	0.570	0.240
300	0.220	0.020
290	0.040	
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
I-line glass	

Relative Partial Dispersion	
$P_{s,t}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{e,d}$	0.2386
$P_{g,F}$	0.5349
$P_{t,h}$	0.7483
$P'_{s,t}$	0.3076
$P'_{C',s}$	0.6062
$P'_{d,C'}$	0.2566
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4754
$P'_{i,h}$	0.7432

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0035

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.3
T_g [°C]	557
T_{10}^{13} [°C]	557
$T_{10}^{7.6}$ [°C]	719
c_p [J/(g·K)]	0.858
λ [W/(m·K)]	1.114
ρ [g/cm ³]	2.51
E [10^3 N/mm ²]	82
μ	0.206
K [10^{-6} mm ² /N]	2.77
$HK_{0.1/20}$	610
HG	3
CR	1
FR	0
SR	1
AR	2.3
PR	2.3

N-BK10
498670.239

 $n_d = 1.49782$ $v_d = 66.95$ $n_F - n_C = 0.007435$ $n_e = 1.49960$ $v_e = 66.78$ $n_F' - n_C' = 0.007481$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.47060
$n_{1970.1}$	1970.1	1.47647
$n_{1529.6}$	1529.6	1.48252
$n_{1060.0}$	1060.0	1.48827
n_t	1014.0	1.48887
n_s	852.1	1.49127
n_f	706.5	1.49419
n_C	656.3	1.49552
$n_{C'}$	643.8	1.49589
$n_{632.8}$	632.8	1.49623
n_D	589.3	1.49775
n_d	587.6	1.49782
n_e	546.1	1.49960
n_F	486.1	1.50296
$n_{F'}$	480.0	1.50337
n_g	435.8	1.50690
n_h	404.7	1.51014
n_i	365.0	1.51561
$n_{334.1}$	334.1	1.52144
$n_{312.6}$	312.6	1.52674
$n_{296.7}$	296.7	1.53151
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.88830813
B_2	0.328964475
B_3	0.984610769
C_1	0.00516900822
C_2	0.0161190045
C_3	99.7575331

Constants of Formula for dn/dT	
D_0	3.32E-06
D_1	1.72E-08
D_2	-2.05E-11
E_0	3.57E-07
E_1	3.90E-10
λ_{TK} [μm]	0.169

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.7	3.1	3.5	0.7	1.1	1.4
+20/+40	2.9	3.4	3.8	1.6	2.1	2.5
+60/+80	3.1	3.7	4.1	2.1	2.6	3.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.740	0.470
2325	0.870	0.710
1970	0.980	0.950
1530	0.992	0.980
1060	0.998	0.996
700	0.998	0.995
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.996	0.991
460	0.996	0.990
436	0.996	0.989
420	0.996	0.989
405	0.996	0.990
400	0.996	0.990
390	0.996	0.989
380	0.994	0.985
370	0.994	0.986
365	0.994	0.986
350	0.991	0.978
334	0.978	0.950
320	0.940	0.860
310	0.870	0.710
300	0.710	0.420
290	0.410	0.110
280	0.120	
270	0.010	
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	31/27
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.3224
$P_{C,s}$	0.5716
$P_{d,C}$	0.3093
$P_{e,d}$	0.2387
$P_{g,F}$	0.5303
$P_{t,h}$	0.7360
$P'_{s,t}$	0.3204
$P'_{C',s}$	0.6174
$P'_{d,C'}$	0.2580
$P'_{e,d}$	0.2373
$P'_{g,F'}$	0.4716
$P'_{i,h}$	0.7315

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0314
$\Delta P_{C,s}$	0.0126
$\Delta P_{F,e}$	-0.0012
$\Delta P_{g,F}$	-0.0008
$\Delta P_{i,g}$	0.0091

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.6
T_g [°C]	551
T_{10}^{13} [°C]	
$T_{10}^{7.6}$ [°C]	753
c_p [J/(g·K)]	0.810
λ [W/(m·K)]	1.320
ρ [g/cm ³]	2.39
E [10^3 N/mm ²]	71
μ	0.203
K [10^{-6} mm ² /N]	3.21
$HK_{0.1/20}$	560
HG	4
CR	1
FR	0
SR	1
AR	1
PR	1

P-BK7
516641.243

 $n_d = 1.51640$ $v_d = 64.06$ $n_F - n_C = 0.008061$ $n_e = 1.51832$ $v_e = 63.87$ $n_{F'} - n_{C'} = 0.008115$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48811
$n_{1970.1}$	1970.1	1.49407
$n_{1529.6}$	1529.6	1.50025
$n_{1060.0}$	1060.0	1.50620
n_t	1014.0	1.50683
n_s	852.1	1.50936
n_f	706.5	1.51248
n_C	656.3	1.51392
$n_{C'}$	643.8	1.51431
$n_{632.8}$	632.8	1.51469
n_D	589.3	1.51633
n_d	587.6	1.51640
n_e	546.1	1.51832
n_F	486.1	1.52198
$n_{F'}$	480.0	1.52243
n_g	435.8	1.52628
n_h	404.7	1.52982
n_i	365.0	1.53583
$n_{334.1}$	334.1	1.54227
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.18318503
B_2	0.087175643
B_3	1.031337010
C_1	0.00722141956
C_2	0.0268216805
C_3	101.7023620

Constants of Formula for dn/dT	
D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [μm]	

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20						
+20/+40						
+60/+80						

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.460
2325	0.870	0.700
1970	0.967	0.920
1530	0.992	0.979
1060	0.999	0.999
700	0.999	0.997
660	0.999	0.997
620	0.999	0.997
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.998	0.995
436	0.998	0.994
420	0.997	0.994
405	0.997	0.993
400	0.997	0.992
390	0.996	0.990
380	0.994	0.986
370	0.992	0.979
365	0.989	0.973
350	0.971	0.930
334	0.880	0.730
320	0.570	0.240
310	0.180	0.020
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.3143
$P_{C,s}$	0.5649
$P_{d,C}$	0.3082
$P_{e,d}$	0.2387
$P_{g,F}$	0.5335
$P_{t,h}$	0.7455
$P'_{s,t}$	0.3122
$P'_{C',s}$	0.6102
$P'_{d,C'}$	0.2571
$P'_{e,d}$	0.2371
$P'_{g,F'}$	0.4742
$P'_{i,h}$	0.7405

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0303
$\Delta P_{C,s}$	0.0126
$\Delta P_{F,e}$	-0.0016
$\Delta P_{g,F}$	-0.0025
$\Delta P_{i,g}$	-0.0017

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	498
T_{10}^{13} [°C]	498
$T_{10}^{7.6}$ [°C]	657
c_p [J/(g·K)]	0.870
λ [W/(m·K)]	1.130
AT [°C]	546
ρ [g/cm ³]	2.43
E [10^3 N/mm ²]	85
μ	0.202
K [10^{-6} mm ² /N]	2.77
HK _{0.1/20}	627
Abrasion Aa	66
CR	1
FR	0
SR	1
AR	2.3
PR	2.3
SR-J	1
WR-J	4

K7
511604.253

 $n_d = 1.51112$ $v_d = 60.41$ $n_F - n_C = 0.008461$ $n_e = 1.51314$ $v_e = 60.15$ $n_F' - n_C' = 0.008531$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48553
$n_{1970.1}$	1970.1	1.49046
$n_{1529.6}$	1529.6	1.49565
$n_{1060.0}$	1060.0	1.50091
n_t	1014.0	1.50150
n_s	852.1	1.50394
n_f	706.5	1.50707
n_C	656.3	1.50854
$n_{C'}$	643.8	1.50895
$n_{632.8}$	632.8	1.50934
n_D	589.3	1.51105
n_d	587.6	1.51112
n_e	546.1	1.51314
n_F	486.1	1.51700
$n_{F'}$	480.0	1.51748
n_g	435.8	1.52159
n_h	404.7	1.52540
n_i	365.0	1.53189
$n_{334.1}$	334.1	1.53891
$n_{312.6}$	312.6	1.54537
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.12735550
B_2	0.124412303
B_3	0.827100531
C_1	0.00720341707
C_2	0.0269835916
C_3	100.3845880

Constants of Formula for dn/dT	
D_0	-1.67E-06
D_1	8.80E-09
D_2	-2.86E-11
E_0	5.42E-07
E_1	7.81E-10
λ_{TK} [μm]	0.172

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.0	1.6	2.1	-1.0	-0.4	0.1
+20/+40	0.9	1.6	2.2	-0.4	0.2	0.9
+60/+80	0.8	1.6	2.3	-0.2	0.6	1.2

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.650	0.340
2325	0.760	0.500
1970	0.910	0.790
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.994
546	0.998	0.994
500	0.997	0.993
460	0.996	0.990
436	0.996	0.990
420	0.996	0.990
405	0.996	0.990
400	0.996	0.990
390	0.995	0.988
380	0.993	0.983
370	0.990	0.976
365	0.988	0.971
350	0.976	0.940
334	0.910	0.780
320	0.710	0.420
310	0.400	0.100
300	0.090	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/30

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2880
$P_{C,s}$	0.5436
$P_{d,C}$	0.3049
$P_{e,d}$	0.2385
$P_{g,F}$	0.5422
$P_{t,h}$	0.7677
$P'_{s,t}$	0.2857
$P'_{C',s}$	0.5874
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4814
$P'_{i,h}$	0.7614

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0001
$\Delta P_{C,s}$	-0.0001
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	0.0000
$\Delta P_{i,g}$	-0.0001

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.7
T_g [°C]	513
T_{10}^{13} [°C]	
$T_{10}^{7.6}$ [°C]	712
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm ³]	2.53
E [10^3 N/mm ²]	69
μ	0.214
K [10^{-6} mm ² /N]	2.95
$HK_{0.1/20}$	520
HG	3
CR	3
FR	0
SR	2
AR	1
PR	2.3

K10
501564.252

 $n_d = 1.50137$ $v_d = 56.41$ $n_F - n_C = 0.008888$ $n_e = 1.50349$ $v_e = 56.15$ $n_F' - n_C' = 0.008967$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.47507
$n_{1970.1}$	1970.1	1.48008
$n_{1529.6}$	1529.6	1.48536
$n_{1060.0}$	1060.0	1.49076
n_t	1014.0	1.49137
n_s	852.1	1.49389
n_f	706.5	1.49713
n_C	656.3	1.49867
$n_{C'}$	643.8	1.49910
$n_{632.8}$	632.8	1.49950
n_D	589.3	1.50129
n_d	587.6	1.50137
n_e	546.1	1.50349
n_F	486.1	1.50756
$n_{F'}$	480.0	1.50807
n_g	435.8	1.51243
n_h	404.7	1.51649
n_i	365.0	1.52350
$n_{334.1}$	334.1	1.53120
$n_{312.6}$	312.6	1.53844
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.15687082
B_2	0.064262544
B_3	0.872376139
C_1	0.00809424251
C_2	0.0386051284
C_3	104.7477300

Constants of Formula for dn/dT	
D_0	4.86E-06
D_1	1.72E-08
D_2	-3.02E-11
E_0	3.82E-07
E_1	4.53E-10
λ_{TK} [μm]	0.260

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.3	3.9	4.5	1.3	1.8	2.4
+20/+40	3.6	4.2	4.9	2.3	2.9	3.6
+60/+80	3.8	4.5	5.2	2.8	3.4	4.2

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.770	0.520
2325	0.830	0.630
1970	0.940	0.850
1530	0.993	0.983
1060	0.998	0.996
700	0.999	0.997
660	0.998	0.994
620	0.997	0.993
580	0.997	0.993
546	0.997	0.992
500	0.996	0.991
460	0.996	0.990
436	0.995	0.988
420	0.995	0.988
405	0.995	0.987
400	0.994	0.986
390	0.993	0.982
380	0.989	0.973
370	0.986	0.966
365	0.983	0.958
350	0.963	0.910
334	0.880	0.720
320	0.630	0.310
310	0.370	0.130
300	0.140	0.020
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2835
$P_{C,s}$	0.5385
$P_{d,C}$	0.3037
$P_{e,d}$	0.2382
$P_{g,F}$	0.5475
$P_{t,h}$	0.7888
$P'_{s,t}$	0.2810
$P'_{C',s}$	0.5817
$P'_{d,C'}$	0.2531
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4860
$P'_{i,h}$	0.7819

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0094
$\Delta P_{C,s}$	0.0041
$\Delta P_{F,e}$	-0.0007
$\Delta P_{g,F}$	-0.0015
$\Delta P_{i,g}$	-0.0048

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	459
T_{10}^{13} [°C]	453
$T_{10}^{7.6}$ [°C]	691
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.120
ρ [g/cm ³]	2.52
E [10^3 N/mm ²]	65
μ	0.190
K [10^{-6} mm ² /N]	3.12
$HK_{0.1/20}$	470
HG	4
CR	1
FR	0
SR	1
AR	1
PR	1.2

N-K5
522595.259 $n_d = 1.52249$ $v_d = 59.48$ $n_F - n_C = 0.008784$ $n_e = 1.52458$ $v_e = 59.22$ $n_F' - n_C' = 0.008858$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.49656
$n_{1970.1}$	1970.1	1.50146
$n_{1529.6}$	1529.6	1.50664
$n_{1060.0}$	1060.0	1.51197
n_t	1014.0	1.51257
n_s	852.1	1.51507
n_f	706.5	1.51829
n_C	656.3	1.51982
$n_{C'}$	643.8	1.52024
$n_{632.8}$	632.8	1.52064
n_D	589.3	1.52241
n_d	587.6	1.52249
n_e	546.1	1.52458
n_F	486.1	1.52860
$n_{F'}$	480.0	1.52910
n_g	435.8	1.53338
n_h	404.7	1.53734
n_i	365.0	1.54412
$n_{334.1}$	334.1	1.55145
$n_{312.6}$	312.6	1.55821
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.08511833
B_2	0.199562005
B_3	0.930511663
C_1	0.00661099503
C_2	0.0241108660
C_3	111.9827770

Constants of Formula for dn/dT	
D_0	-4.13E-07
D_1	1.03E-08
D_2	-3.40E-11
E_0	4.73E-07
E_1	5.19E-10
λ_{TK} [μm]	0.213

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.5	2.1	2.6	-0.6	0.0	0.5
+20/+40	1.4	2.1	2.7	0.1	0.7	1.4
+60/+80	1.4	2.1	2.8	0.4	1.1	1.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.530
2325	0.850	0.660
1970	0.950	0.870
1530	0.994	0.986
1060	0.998	0.995
700	0.998	0.994
660	0.997	0.992
620	0.997	0.993
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.996	0.991
436	0.996	0.991
420	0.996	0.991
405	0.996	0.989
400	0.995	0.988
390	0.994	0.984
380	0.991	0.977
370	0.985	0.962
365	0.982	0.956
350	0.950	0.880
334	0.830	0.630
320	0.540	0.210
310	0.220	0.020
300	0.060	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2843
$P_{C,s}$	0.5404
$P_{d,C}$	0.3044
$P_{e,d}$	0.2384
$P_{g,F}$	0.5438
$P_{t,h}$	0.7717
$P'_{s,t}$	0.2819
$P'_{C',s}$	0.5839
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2364
$P'_{g,F'}$	0.4828
$P'_{i,h}$	0.7653

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0025
$\Delta P_{C,s}$	-0.0012
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0000
$\Delta P_{i,g}$	-0.0019

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.6
T_g [°C]	546
T_{10}^{13} [°C]	540
$T_{10}^{7.6}$ [°C]	720
c_p [J/(g·K)]	0.783
λ [W/(m·K)]	0.950
ρ [g/cm ³]	2.59
E [10^3 N/mm ²]	71
μ	0.224
K [10^{-6} mm ² /N]	3.03
$HK_{0.1/20}$	530
HG	3
CR	1
FR	0
SR	1
AR	1
PR	1

N-ZK7
508612.249

 $n_d = 1.50847$ $v_d = 61.19$ $n_F - n_C = 0.008310$ $n_e = 1.51045$ $v_e = 60.98$ $n_{F'} - n_{C'} = 0.008370$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48062
$n_{1970.1}$	1970.1	1.48637
$n_{1529.6}$	1529.6	1.49233
$n_{1060.0}$	1060.0	1.49813
n_t	1014.0	1.49876
n_s	852.1	1.50129
n_f	706.5	1.50445
n_C	656.3	1.50592
$n_{C'}$	643.8	1.50633
$n_{632.8}$	632.8	1.50671
n_D	589.3	1.50840
n_d	587.6	1.50847
n_e	546.1	1.51045
n_F	486.1	1.51423
$n_{F'}$	480.0	1.51470
n_g	435.8	1.51869
n_h	404.7	1.52238
n_i	365.0	1.52865
$n_{334.1}$	334.1	1.53538
$n_{312.6}$	312.6	1.54155
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.07715032
B_2	0.168079109
B_3	0.851889892
C_1	0.00676601657
C_2	0.0230642817
C_3	89.0498778

Constants of Formula for dn/dT	
D_0	1.15E-05
D_1	1.73E-08
D_2	-8.06E-11
E_0	4.32E-07
E_1	7.05E-10
λ_{TK} [μm]	0.179

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	5.9	6.5	7.0	3.9	4.5	4.9
+20/+40	6.4	7.0	7.6	5.1	5.7	6.3
+60/+80	6.4	7.2	7.8	5.4	6.2	6.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.660	0.350
2325	0.850	0.660
1970	0.971	0.930
1530	0.990	0.976
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.995	0.988
436	0.994	0.984
420	0.992	0.981
405	0.991	0.977
400	0.990	0.975
390	0.987	0.969
380	0.982	0.956
370	0.976	0.940
365	0.971	0.930
350	0.940	0.860
334	0.850	0.670
320	0.690	0.390
310	0.490	0.170
300	0.220	0.030
290	0.030	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	34/29
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.3049
$P_{C,s}$	0.5570
$P_{d,C}$	0.3069
$P_{e,d}$	0.2386
$P_{g,F}$	0.5370
$P_{t,h}$	0.7543
$P'_{s,t}$	0.3027
$P'_{C',s}$	0.6017
$P'_{d,C'}$	0.2560
$P'_{e,d}$	0.2369
$P'_{g,F'}$	0.4771
$P'_{i,h}$	0.7488

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0267
$\Delta P_{C,s}$	0.0115
$\Delta P_{F,e}$	-0.0017
$\Delta P_{g,F}$	-0.0039
$\Delta P_{i,g}$	-0.0129

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	4.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	5.2
T_g [°C]	539
T_{10}^{13} [°C]	
$T_{10}^{7.6}$ [°C]	721
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.042
ρ [g/cm ³]	2.49
E [10^3 N/mm ²]	70
μ	0.214
K [10^{-6} mm ² /N]	3.63
$HK_{0.1/20}$	530
HG	4
CR	1
FR	0
SR	2
AR	1.2
PR	2.2

N-ZK7A
508610.247 $n_d = 1.50805$ $v_d = 61.04$ $n_F - n_C = 0.008323$ $n_e = 1.51004$ $v_e = 60.84$ $n_{F'} - n_{C'} = 0.008384$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.48001
$n_{1970.1}$	1970.1	1.48582
$n_{1529.6}$	1529.6	1.49184
$n_{1060.0}$	1060.0	1.49768
n_t	1014.0	1.49831
n_s	852.1	1.50086
n_f	706.5	1.50403
n_C	656.3	1.50550
$n_{C'}$	643.8	1.50591
$n_{632.8}$	632.8	1.50629
n_D	589.3	1.50798
n_d	587.6	1.50805
n_e	546.1	1.51004
n_F	486.1	1.51382
$n_{F'}$	480.0	1.51429
n_g	435.8	1.51829
n_h	404.7	1.52198
n_i	365.0	1.52826
$n_{334.1}$	334.1	1.53500
$n_{312.6}$	312.6	1.54118
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.07509891
B_2	0.168895044
B_3	0.860503983
C_1	0.00676601657
C_2	0.0230642817
C_3	89.0498778

Constants of Formula for dn/dT	
D_0	1.09E-05
D_1	1.98E-08
D_2	-1.49E-11
E_0	4.48E-07
E_1	3.26E-10
λ_{TK} [μm]	0.183

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	5.8	6.5	7.0	3.8	4.4	4.9
+20/+40	6.1	6.8	7.4	4.9	5.5	6.1
+60/+80	6.5	7.2	7.9	5.5	6.2	6.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.660	0.350
2325	0.850	0.660
1970	0.971	0.930
1530	0.990	0.976
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.995	0.988
436	0.994	0.984
420	0.992	0.981
405	0.991	0.977
400	0.990	0.975
390	0.987	0.969
380	0.982	0.956
370	0.976	0.940
365	0.971	0.930
350	0.940	0.860
334	0.850	0.670
320	0.690	0.390
310	0.490	0.170
300	0.220	0.030
290	0.030	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/29

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.3058
$P_{C,s}$	0.5576
$P_{d,C}$	0.3070
$P_{e,d}$	0.2386
$P_{g,F}$	0.5368
$P_{t,h}$	0.7540
$P'_{s,t}$	0.3036
$P'_{C',s}$	0.6024
$P'_{d,C'}$	0.2560
$P'_{e,d}$	0.2369
$P'_{g,F'}$	0.4770
$P'_{i,h}$	0.7486

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0289
$\Delta P_{C,s}$	0.0125
$\Delta P_{F,e}$	-0.0019
$\Delta P_{g,F}$	-0.0043
$\Delta P_{i,g}$	-0.0146

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	4.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	5.2
T_g [°C]	519
T_{10}^{13} [°C]	547
$T_{10}^{7.6}$ [°C]	729
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.042
ρ [g/cm ³]	2.47
E [10^3 N/mm ²]	70
μ	0.214
K [10^{-6} mm ² /N]	3.63
$HK_{0.1/20}$	530
CR	1
FR	0
SR	2
AR	1.2
PR	2.2

N-BAK1
573576.319 $n_d = 1.57250$ $v_d = 57.55$ $n_F - n_C = 0.009948$ $n_e = 1.57487$ $v_e = 57.27$ $n_F' - n_C' = 0.010039$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54556
$n_{1970.1}$	1970.1	1.55032
$n_{1529.6}$	1529.6	1.55543
$n_{1060.0}$	1060.0	1.56088
n_t	1014.0	1.56152
n_s	852.1	1.56421
n_f	706.5	1.56778
n_C	656.3	1.56949
$n_{C'}$	643.8	1.56997
$n_{632.8}$	632.8	1.57041
n_D	589.3	1.57241
n_d	587.6	1.57250
n_e	546.1	1.57487
n_F	486.1	1.57943
$n_{F'}$	480.0	1.58000
n_g	435.8	1.58488
n_h	404.7	1.58941
n_i	365.0	1.59716
$n_{334.1}$	334.1	1.60554
$n_{312.6}$	312.6	1.61326
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.12365662
B_2	0.309276848
B_3	0.881511957
C_1	0.00644742752
C_2	0.0222284402
C_3	107.2977510

Constants of Formula for dn/dT	
D_0	1.86E-07
D_1	1.29E-08
D_2	-1.87E-11
E_0	5.25E-07
E_1	5.46E-10
λ_{TK} [μm]	0.182

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.7	2.4	3.0	-0.4	0.2	0.8
+20/+40	1.8	2.5	3.2	0.4	1.2	1.8
+60/+80	1.9	2.7	3.5	0.9	1.7	2.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.880	0.720
1970	0.960	0.900
1530	0.994	0.986
1060	0.998	0.996
700	0.999	0.997
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.996	0.990
436	0.996	0.989
420	0.996	0.990
405	0.996	0.990
400	0.996	0.990
390	0.995	0.988
380	0.993	0.983
370	0.991	0.977
365	0.987	0.969
350	0.971	0.930
334	0.920	0.820
320	0.800	0.570
310	0.610	0.290
300	0.350	0.070
290	0.100	
280	0.010	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/29

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2712
$P_{C,s}$	0.5301
$P_{d,C}$	0.3029
$P_{e,d}$	0.2384
$P_{g,F}$	0.5472
$P_{t,h}$	0.7788
$P'_{s,t}$	0.2687
$P'_{C',s}$	0.5730
$P'_{d,C'}$	0.2525
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4855
$P'_{i,h}$	0.7717

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0167
$\Delta P_{C,s}$	-0.0069
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	-0.0075

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.6
T_g [°C]	592
T_{10}^{13} [°C]	592
$T_{10}^{7.6}$ [°C]	746
c_p [J/(g·K)]	0.687
λ [W/(m·K)]	0.795
ρ [g/cm ³]	3.19
E [10^3 N/mm ²]	73
μ	0.252
K [10^{-6} mm ² /N]	2.62
$HK_{0.1/20}$	530
HG	2
CR	2
FR	1
SR	3.3
AR	1.2
PR	2

N-BAK2
540597.286

 $n_d = 1.53996$ $v_d = 59.71$ $n_F - n_C = 0.009043$ $n_e = 1.54212$ $v_e = 59.44$ $n_{F'} - n_{C'} = 0.009120$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.51387
$n_{1970.1}$	1970.1	1.51871
$n_{1529.6}$	1529.6	1.52385
$n_{1060.0}$	1060.0	1.52919
n_t	1014.0	1.52980
n_s	852.1	1.53234
n_f	706.5	1.53564
n_C	656.3	1.53721
$n_{C'}$	643.8	1.53765
$n_{632.8}$	632.8	1.53806
n_D	589.3	1.53988
n_d	587.6	1.53996
n_e	546.1	1.54212
n_F	486.1	1.54625
$n_{F'}$	480.0	1.54677
n_g	435.8	1.55117
n_h	404.7	1.55525
n_i	365.0	1.56221
$n_{334.1}$	334.1	1.56971
$n_{312.6}$	312.6	1.57660
$n_{296.7}$	296.7	1.58287
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.01662154
B_2	0.319903051
B_3	0.937232995
C_1	0.00592383763
C_2	0.0203828415
C_3	113.1184170

Constants of Formula for dn/dT	
D_0	-1.45E-06
D_1	1.10E-08
D_2	4.89E-12
E_0	5.16E-07
E_1	3.05E-10
λ_{TK} [μm]	0.164

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.1	1.8	2.3	-0.9	-0.3	0.2
+20/+40	1.0	1.7	2.3	-0.3	0.3	0.9
+60/+80	1.1	1.8	2.4	0.1	0.8	1.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.500
2325	0.830	0.630
1970	0.940	0.850
1530	0.994	0.984
1060	0.999	0.997
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.998	0.994
460	0.997	0.992
436	0.997	0.992
420	0.997	0.993
405	0.997	0.993
400	0.997	0.993
390	0.997	0.992
380	0.996	0.990
370	0.996	0.989
365	0.994	0.986
350	0.988	0.971
334	0.963	0.910
320	0.870	0.700
310	0.690	0.400
300	0.400	0.100
290	0.160	
280	0.040	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	32/28

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2810
$P_{C,s}$	0.5382
$P_{d,C}$	0.3042
$P_{e,d}$	0.2385
$P_{g,F}$	0.5437
$P_{t,h}$	0.7695
$P'_{s,t}$	0.2787
$P'_{C',s}$	0.5817
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2364
$P'_{g,F'}$	0.4826
$P'_{i,h}$	0.7630

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0089
$\Delta P_{C,s}$	-0.0039
$\Delta P_{F,e}$	0.0004
$\Delta P_{g,F}$	0.0004
$\Delta P_{i,g}$	-0.0027

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.0
T_g [°C]	554
T_{10}^{13} [°C]	550
$T_{10}^{7.6}$ [°C]	727
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.920
ρ [g/cm ³]	2.86
E [10^3 N/mm ²]	71
μ	0.233
K [10^{-6} mm ² /N]	2.60
$HK_{0.1/20}$	530
HG	2
CR	2
FR	0
SR	1
AR	1
PR	2.3

N-BAK4
569560.305 $n_d = 1.56883$ $v_d = 55.98$ $n_F - n_C = 0.010162$ $n_e = 1.57125$ $v_e = 55.70$ $n_F' - n_C' = 0.010255$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54044
$n_{1970.1}$	1970.1	1.54561
$n_{1529.6}$	1529.6	1.55111
$n_{1060.0}$	1060.0	1.55688
n_t	1014.0	1.55755
n_s	852.1	1.56034
n_f	706.5	1.56400
n_C	656.3	1.56575
$n_{C'}$	643.8	1.56624
$n_{632.8}$	632.8	1.56670
n_D	589.3	1.56874
n_d	587.6	1.56883
n_e	546.1	1.57125
n_F	486.1	1.57591
$n_{F'}$	480.0	1.57649
n_g	435.8	1.58149
n_h	404.7	1.58614
n_i	365.0	1.59415
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28834642
B_2	0.132817724
B_3	0.945395373
C_1	0.00779980626
C_2	0.0315631177
C_3	105.9658750

Constants of Formula for dn/dT	
D_0	3.06E-06
D_1	1.44E-08
D_2	-2.23E-11
E_0	5.46E-07
E_1	6.05E-10
λ_{TK} [μm]	0.189

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.7	4.4	0.9	1.5	2.2
+20/+40	3.1	3.9	4.7	1.8	2.6	3.3
+60/+80	3.3	4.2	5.0	2.2	3.1	3.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.540
2325	0.870	0.710
1970	0.959	0.900
1530	0.993	0.982
1060	0.998	0.995
700	0.999	0.997
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.998	0.994
460	0.996	0.989
436	0.995	0.988
420	0.995	0.987
405	0.993	0.983
400	0.992	0.980
390	0.987	0.967
380	0.976	0.940
370	0.954	0.890
365	0.930	0.840
350	0.790	0.550
334	0.350	0.070
320	0.010	
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2749
$P_{C,s}$	0.5321
$P_{d,C}$	0.3029
$P_{e,d}$	0.2383
$P_{g,F}$	0.5487
$P_{t,h}$	0.7879
$P'_{s,t}$	0.2724
$P'_{C',s}$	0.5750
$P'_{d,C'}$	0.2524
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4869
$P'_{i,h}$	0.7807

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0034
$\Delta P_{C,s}$	-0.0013
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0087

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.9
T_g [°C]	581
T_{10}^{13} [°C]	569
$T_{10}^{7.6}$ [°C]	725
c_p [J/(g·K)]	0.680
λ [W/(m·K)]	0.880
ρ [g/cm ³]	3.05
E [10^3 N/mm ²]	77
μ	0.240
K [10^{-6} mm ² /N]	2.90
$HK_{0.1/20}$	550
HG	2
CR	1
FR	0
SR	1.2
AR	1
PR	1

N-BAK4HT
569560.305 $n_d = 1.56883$ $v_d = 55.98$ $n_F - n_C = 0.010162$ $n_e = 1.57125$ $v_e = 55.70$ $n_F' - n_C' = 0.010255$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54044
$n_{1970.1}$	1970.1	1.54561
$n_{1529.6}$	1529.6	1.55111
$n_{1060.0}$	1060.0	1.55688
n_t	1014.0	1.55755
n_s	852.1	1.56034
n_f	706.5	1.56400
n_C	656.3	1.56575
$n_{C'}$	643.8	1.56624
$n_{632.8}$	632.8	1.56670
n_D	589.3	1.56874
n_d	587.6	1.56883
n_e	546.1	1.57125
n_F	486.1	1.57591
$n_{F'}$	480.0	1.57649
n_g	435.8	1.58149
n_h	404.7	1.58614
n_i	365.0	1.59415
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28834642
B_2	0.132817724
B_3	0.945395373
C_1	0.00779980626
C_2	0.0315631177
C_3	105.9658750

Constants of Formula for dn/dT	
D_0	3.06E-06
D_1	1.44E-08
D_2	-2.23E-11
E_0	5.46E-07
E_1	6.05E-10
λ_{TK} [μm]	0.189

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.7	4.4	0.9	1.5	2.2
+20/+40	3.1	3.9	4.7	1.8	2.6	3.3
+60/+80	3.3	4.2	5.0	2.2	3.1	3.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.850	0.670
2325	0.920	0.810
1970	0.979	0.950
1530	0.996	0.991
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.996
620	0.998	0.996
580	0.998	0.996
546	0.998	0.996
500	0.998	0.995
460	0.997	0.993
436	0.997	0.992
420	0.996	0.991
405	0.994	0.985
400	0.993	0.983
390	0.989	0.972
380	0.979	0.950
370	0.959	0.900
365	0.940	0.860
350	0.810	0.600
334	0.390	0.100
320	0.020	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2749
$P_{C,s}$	0.5321
$P_{d,C}$	0.3029
$P_{e,d}$	0.2383
$P_{g,F}$	0.5487
$P_{t,h}$	0.7879
$P'_{s,t}$	0.2724
$P'_{C',s}$	0.5750
$P'_{d,C'}$	0.2524
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4869
$P'_{i,h}$	0.7807

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0034
$\Delta P_{C,s}$	-0.0013
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0087

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.9
T_g [°C]	581
T_{10}^{13} [°C]	569
$T_{10}^{7.6}$ [°C]	725
c_p [J/(g·K)]	0.680
λ [W/(m·K)]	0.880
ρ [g/cm ³]	3.05
E [10^3 N/mm ²]	77
μ	0.240
K [10^{-6} mm ² /N]	2.90
$HK_{0.1/20}$	550
HG	2
CR	1
FR	0
SR	1.2
AR	1
PR	1

N-BAF4
606437.289

 $n_d = 1.60568$ $v_d = 43.72$ $n_F - n_C = 0.013853$ $n_e = 1.60897$ $v_e = 43.43$ $n_{F'} - n_{C'} = 0.014021$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57092
$n_{1970.1}$	1970.1	1.57685
$n_{1529.6}$	1529.6	1.58323
$n_{1060.0}$	1060.0	1.59016
n_t	1014.0	1.59099
n_s	852.1	1.59452
n_f	706.5	1.59926
n_C	656.3	1.60157
$n_{C'}$	643.8	1.60222
$n_{632.8}$	632.8	1.60282
n_D	589.3	1.60556
n_d	587.6	1.60568
n_e	546.1	1.60897
n_F	486.1	1.61542
$n_{F'}$	480.0	1.61624
n_g	435.8	1.62336
n_h	404.7	1.63022
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.42056328
B_2	0.102721269
B_3	1.143809760
C_1	0.00942015382
C_2	0.0531087291
C_3	110.2788560

Constants of Formula for dn/dT	
D_0	9.39E-07
D_1	1.24E-08
D_2	-9.00E-12
E_0	6.17E-07
E_1	8.42E-10
λ_{TK} [μm]	0.242

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.2	3.1	4.1	0.1	0.9	1.9
+20/+40	2.2	3.3	4.5	0.9	1.9	3.0
+60/+80	2.4	3.6	4.9	1.3	2.5	3.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.710	0.420
2325	0.840	0.640
1970	0.954	0.890
1530	0.991	0.977
1060	0.998	0.994
700	0.998	0.994
660	0.996	0.991
620	0.996	0.990
580	0.997	0.992
546	0.997	0.992
500	0.994	0.985
460	0.988	0.971
436	0.983	0.959
420	0.976	0.940
405	0.959	0.900
400	0.950	0.870
390	0.900	0.770
380	0.800	0.580
370	0.600	0.280
365	0.440	0.130
350	0.010	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/35
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2545
$P_{C,s}$	0.5089
$P_{d,C}$	0.2972
$P_{e,d}$	0.2372
$P_{g,F}$	0.5733
$P_{t,h}$	
$P'_{s,t}$	0.2515
$P'_{C',s}$	0.5491
$P'_{d,C'}$	0.2473
$P'_{e,d}$	0.2344
$P'_{g,F'}$	0.5081
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0110
$\Delta P_{C,s}$	0.0041
$\Delta P_{F,e}$	0.0002
$\Delta P_{g,F}$	0.0030
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.3
T_g [°C]	580
T_{10}^{13} [°C]	580
$T_{10}^{7.6}$ [°C]	709
c_p [J/(g·K)]	0.740
λ [W/(m·K)]	1.020
ρ [g/cm ³]	2.89
E [10^3 N/mm ²]	85
μ	0.231
K [10^{-6} mm ² /N]	2.58
$HK_{0.1/20}$	610
HG	3
CR	1
FR	0
SR	1
AR	1.2
PR	1.3

N-BAF10
670471.375 $n_d = 1.67003$ $v_d = 47.11$ $n_F - n_C = 0.014222$ $n_e = 1.67341$ $v_e = 46.83$ $n_F' - n_C' = 0.014380$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.63524
$n_{1970.1}$	1970.1	1.64094
$n_{1529.6}$	1529.6	1.64714
$n_{1060.0}$	1060.0	1.65404
n_t	1014.0	1.65488
n_s	852.1	1.65849
n_f	706.5	1.66339
n_C	656.3	1.66578
$n_{C'}$	643.8	1.66645
$n_{632.8}$	632.8	1.66708
n_D	589.3	1.66990
n_d	587.6	1.67003
n_e	546.1	1.67341
n_F	486.1	1.68000
$n_{F'}$	480.0	1.68083
n_g	435.8	1.68801
n_h	404.7	1.69480
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.58514950
B_2	0.143559385
B_3	1.085212690
C_1	0.00926681282
C_2	0.0424489805
C_3	105.6135730

Constants of Formula for dn/dT	
D_0	3.79E-06
D_1	1.28E-08
D_2	-1.42E-11
E_0	5.84E-07
E_1	7.60E-10
λ_{TK} [μm]	0.220

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.7	4.7	5.6	1.5	2.4	3.3
+20/+40	3.8	4.9	6.0	2.4	3.5	4.5
+60/+80	4.0	5.2	6.4	2.9	4.1	5.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.450
2325	0.860	0.680
1970	0.967	0.920
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.994
660	0.996	0.990
620	0.996	0.991
580	0.996	0.990
546	0.996	0.990
500	0.992	0.981
460	0.987	0.967
436	0.981	0.954
420	0.976	0.940
405	0.959	0.900
400	0.950	0.880
390	0.920	0.800
380	0.850	0.660
370	0.720	0.440
365	0.630	0.310
350	0.180	0.010
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/35
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2539
$P_{C,s}$	0.5122
$P_{d,C}$	0.2989
$P_{e,d}$	0.2377
$P_{g,F}$	0.5629
$P_{t,h}$	
$P'_{s,t}$	0.2511
$P'_{C',s}$	0.5533
$P'_{d,C'}$	0.2489
$P'_{e,d}$	0.2351
$P'_{g,F'}$	0.4990
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0024
$\Delta P_{C,s}$	-0.0005
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0016
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.0
T_g [°C]	660
T_{10}^{13} [°C]	652
$T_{10}^{7.6}$ [°C]	790
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.780
ρ [g/cm ³]	3.75
E [10^3 N/mm ²]	89
μ	0.271
K [10^{-6} mm ² /N]	2.37
$HK_{0.1/20}$	620
HG	4
CR	1
FR	0
SR	4.3
AR	1.3
PR	1

N-BAF51
652450.333

$n_d = 1.65224$

$v_d = 44.96$

$n_F - n_C = 0.014507$

$n_e = 1.65569$

$v_e = 44.67$

$n_F' - n_C' = 0.014677$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.61873
$n_{1970.1}$	1970.1	1.62390
$n_{1529.6}$	1529.6	1.62961
$n_{1060.0}$	1060.0	1.63619
n_i	1014.0	1.63701
n_s	852.1	1.64059
n_f	706.5	1.64551
n_C	656.3	1.64792
$n_{C'}$	643.8	1.64860
$n_{632.8}$	632.8	1.64924
n_D	589.3	1.65211
n_d	587.6	1.65224
n_e	546.1	1.65569
n_F	486.1	1.66243
$n_{F'}$	480.0	1.66328
n_g	435.8	1.67065
n_h	404.7	1.67766
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.51503623
B_2	0.153621958
B_3	1.154279090
C_1	0.00942734715
C_2	0.0430826500
C_3	124.8898680

Constants of Formula for dn/dT	
D_0	-2.84E-07
D_1	1.04E-08
D_2	-1.80E-11
E_0	7.01E-07
E_1	8.47E-10
λ_{TK} [μm]	0.219

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.7	2.8	3.8	-0.5	0.5	1.5
+20/+40	1.7	2.9	4.1	0.3	1.5	2.7
+60/+80	1.8	3.1	4.4	0.7	2.0	3.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.480
2325	0.830	0.630
1970	0.950	0.870
1530	0.992	0.980
1060	0.997	0.993
700	0.997	0.993
660	0.996	0.990
620	0.996	0.990
580	0.997	0.992
546	0.996	0.991
500	0.994	0.985
460	0.988	0.970
436	0.982	0.956
420	0.976	0.940
405	0.963	0.910
400	0.954	0.890
390	0.920	0.820
380	0.860	0.690
370	0.740	0.470
365	0.640	0.330
350	0.210	0.020
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2463
$P_{C,s}$	0.5055
$P_{d,C}$	0.2977
$P_{e,d}$	0.2376
$P_{g,F}$	0.5670
$P_{i,h}$	
$P'_{s,t}$	0.2435
$P'_{C',s}$	0.5460
$P'_{d,C'}$	0.2479
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5024
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0064
$\Delta P_{C,s}$	-0.0022
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0012
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.5
T_g [°C]	569
T_{10}^{13} [°C]	574
$T_{10}^{7.6}$ [°C]	712
c_p [J/(g·K)]	0.840
λ [W/(m·K)]	0.670
ρ [g/cm ³]	3.33
E [10^3 N/mm ²]	91
μ	0.262
K [10^{-6} mm ² /N]	2.22
$HK_{0.1/20}$	560
HG	5
CR	2
FR	0
SR	5.4
AR	1.3
PR	1

N-BAF52
609466.305 $n_d = 1.60863$ $v_d = 46.60$ $n_F - n_C = 0.013061$ $n_e = 1.61173$ $v_e = 46.30$ $n_{F'} - n_{C'} = 0.013211$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57475
$n_{1970.1}$	1970.1	1.58067
$n_{1529.6}$	1529.6	1.58702
$n_{1060.0}$	1060.0	1.59381
n_t	1014.0	1.59461
n_s	852.1	1.59801
n_f	706.5	1.60254
n_C	656.3	1.60473
$n_{C'}$	643.8	1.60535
$n_{632.8}$	632.8	1.60593
n_D	589.3	1.60852
n_d	587.6	1.60863
n_e	546.1	1.61173
n_F	486.1	1.61779
$n_{F'}$	480.0	1.61856
n_g	435.8	1.62521
n_h	404.7	1.63157
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.43903433
B_2	0.096704605
B_3	1.098758180
C_1	0.00907800128
C_2	0.0508212080
C_3	105.6918560

Constants of Formula for dn/dT	
D_0	1.15E-06
D_1	1.27E-08
D_2	-5.08E-12
E_0	5.64E-07
E_1	6.38E-10
λ_{TK} [μm]	0.238

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.3	3.1	4.0	0.2	0.9	1.8
+20/+40	2.3	3.3	4.3	0.9	1.9	2.9
+60/+80	2.5	3.6	4.7	1.4	2.5	3.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.390
2325	0.830	0.630
1970	0.954	0.890
1530	0.990	0.975
1060	0.998	0.994
700	0.997	0.993
660	0.996	0.990
620	0.996	0.989
580	0.996	0.990
546	0.996	0.989
500	0.992	0.980
460	0.987	0.967
436	0.981	0.954
420	0.975	0.940
405	0.959	0.900
400	0.950	0.880
390	0.910	0.800
380	0.840	0.650
370	0.670	0.370
365	0.540	0.210
350	0.050	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/35
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2600
$P_{C,s}$	0.5147
$P_{d,C}$	0.2985
$P_{e,d}$	0.2374
$P_{g,F}$	0.5678
$P_{t,h}$	
$P'_{s,t}$	0.2571
$P'_{C',s}$	0.5555
$P'_{d,C'}$	0.2485
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5035
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0087
$\Delta P_{C,s}$	0.0031
$\Delta P_{F,e}$	0.0002
$\Delta P_{g,F}$	0.0024
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.9
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.8
T_g [°C]	594
T_{10}^{13} [°C]	596
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.680
λ [W/(m·K)]	0.960
ρ [g/cm ³]	3.05
E [10^3 N/mm ²]	86
μ	0.237
K [10^{-6} mm ² /N]	2.42
$HK_{0.1/20}$	600
HG	3
CR	1
FR	0
SR	1
AR	1.3
PR	1

N-BALF4
580539.311 $n_d = 1.57956$ $v_d = 53.87$ $n_F - n_C = 0.010759$ $n_e = 1.58212$ $v_e = 53.59$ $n_{F'} - n_{C'} = 0.010863$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.55068
$n_{1970.1}$	1970.1	1.55577
$n_{1529.6}$	1529.6	1.56124
$n_{1060.0}$	1060.0	1.56707
n_t	1014.0	1.56776
n_s	852.1	1.57065
n_f	706.5	1.57447
n_C	656.3	1.57631
$n_{C'}$	643.8	1.57683
$n_{632.8}$	632.8	1.57731
n_D	589.3	1.57946
n_d	587.6	1.57956
n_e	546.1	1.58212
n_F	486.1	1.58707
$n_{F'}$	480.0	1.58769
n_g	435.8	1.59301
n_h	404.7	1.59799
n_i	365.0	1.60658
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.31004128
B_2	0.142038259
B_3	0.964929351
C_1	0.00796596450
C_2	0.0330672072
C_3	109.1973200

Constants of Formula for dn/dT	
D_0	5.33E-06
D_1	1.47E-08
D_2	-1.58E-11
E_0	5.75E-07
E_1	6.58E-10
λ_{TK} [μm]	0.195

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.1	4.9	5.6	2.0	2.7	3.4
+20/+40	4.2	5.1	6.0	2.9	3.7	4.6
+60/+80	4.4	5.4	6.4	3.4	4.3	5.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.800	0.580
2325	0.890	0.740
1970	0.967	0.920
1530	0.994	0.984
1060	0.997	0.993
700	0.999	0.997
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.995
500	0.997	0.993
460	0.994	0.986
436	0.993	0.983
420	0.992	0.981
405	0.988	0.970
400	0.985	0.964
390	0.976	0.940
380	0.959	0.900
370	0.920	0.820
365	0.890	0.750
350	0.680	0.380
334	0.160	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2687
$P_{C,s}$	0.5265
$P_{d,C}$	0.3019
$P_{e,d}$	0.2382
$P_{g,F}$	0.5520
$P_{t,h}$	0.7986
$P'_{s,t}$	0.2661
$P'_{C',s}$	0.5689
$P'_{d,C'}$	0.2515
$P'_{e,d}$	0.2359
$P'_{g,F'}$	0.4897
$P'_{i,h}$	0.7909

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0053
$\Delta P_{C,s}$	-0.0019
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0012
$\Delta P_{i,g}$	-0.0114

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	578
T_{10}^{13} [°C]	584
$T_{10}^{7.6}$ [°C]	661
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.850
ρ [g/cm ³]	3.11
E [10^3 N/mm ²]	77
μ	0.245
K [10^{-6} mm ² /N]	3.01
$HK_{0.1/20}$	540
HG	2
CR	1
FR	0
SR	1
AR	1
PR	1

N-BALF5
547536.261 $n_d = 1.54739$ $v_d = 53.63$ $n_F - n_C = 0.010207$ $n_e = 1.54982$ $v_e = 53.36$ $n_F' - n_C' = 0.010303$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	
$n_{1529.6}$	1529.6	
$n_{1060.0}$	1060.0	1.53529
n_t	1014.0	1.53598
n_s	852.1	1.53885
n_f	706.5	1.54255
n_C	656.3	1.54430
$n_{C'}$	643.8	1.54479
$n_{632.8}$	632.8	1.54525
n_D	589.3	1.54730
n_d	587.6	1.54739
n_e	546.1	1.54982
n_F	486.1	1.55451
$n_{F'}$	480.0	1.55510
n_g	435.8	1.56016
n_h	404.7	1.56491
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28385965
B_2	0.071930094
B_3	1.050489270
C_1	0.00825815975
C_2	0.0441920027
C_3	107.0973240

Constants of Formula for dn/dT	
D_0	1.14E-06
D_1	1.29E-08
D_2	-1.46E-11
E_0	5.02E-07
E_1	5.87E-10
λ_{TK} [μm]	0.219

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.1	2.8	3.5	0.1	0.7	1.3
+20/+40	2.1	2.9	3.7	0.8	1.6	2.3
+60/+80	2.3	3.1	3.9	1.3	2.1	2.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.620	0.300
2325	0.760	0.500
1970	0.920	0.810
1530	0.989	0.973
1060	0.996	0.991
700	0.998	0.995
660	0.997	0.993
620	0.997	0.993
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.995	0.988
436	0.994	0.984
420	0.991	0.978
405	0.986	0.965
400	0.983	0.957
390	0.967	0.920
380	0.940	0.850
370	0.870	0.710
365	0.820	0.600
350	0.440	0.130
334	0.010	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2810
$P_{C,s}$	0.5345
$P_{d,C}$	0.3025
$P_{e,d}$	0.2380
$P_{g,F}$	0.5532
$P_{t,h}$	
$P'_{s,t}$	0.2783
$P'_{C',s}$	0.5771
$P'_{d,C'}$	0.2520
$P'_{e,d}$	0.2357
$P'_{g,F'}$	0.4909
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0161
$\Delta P_{C,s}$	0.0066
$\Delta P_{F,e}$	-0.0007
$\Delta P_{g,F}$	-0.0004
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	558
T_{10}^{13} [°C]	559
$T_{10}^{7.6}$ [°C]	711
c_p [J/(g·K)]	0.810
λ [W/(m·K)]	1.050
ρ [g/cm ³]	2.61
E [10^3 N/mm ²]	81
μ	0.214
K [10^{-6} mm ² /N]	2.76
$HK_{0.1/20}$	600
HG	2
CR	1
FR	0
SR	1
AR	2
PR	1

N-SK2
607567.355 $n_d = 1.60738$ $v_d = 56.65$ $n_F - n_C = 0.010722$ $n_e = 1.60994$ $v_e = 56.37$ $n_F' - n_C' = 0.010821$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57881
$n_{1970.1}$	1970.1	1.58378
$n_{1529.6}$	1529.6	1.58914
$n_{1060.0}$	1060.0	1.59490
n_t	1014.0	1.59558
n_s	852.1	1.59847
n_f	706.5	1.60230
n_C	656.3	1.60414
$n_{C'}$	643.8	1.60465
$n_{632.8}$	632.8	1.60513
n_D	589.3	1.60729
n_d	587.6	1.60738
n_e	546.1	1.60994
n_F	486.1	1.61486
$n_{F'}$	480.0	1.61547
n_g	435.8	1.62073
n_h	404.7	1.62562
n_i	365.0	1.63398
$n_{334.1}$	334.1	1.64304
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28189012
B_2	0.257738258
B_3	0.968186040
C_1	0.00727191640
C_2	0.0242823527
C_3	110.3777730

Constants of Formula for dn/dT	
D_0	3.80E-06
D_1	1.41E-08
D_2	2.28E-11
E_0	6.44E-07
E_1	8.03E-11
λ_{TK} [μm]	0.108

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.7	4.6	5.3	1.5	2.4	3.1
+20/+40	3.6	4.5	5.3	2.3	3.1	3.9
+60/+80	4.0	4.9	5.7	2.9	3.8	4.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.820	0.600
2325	0.900	0.760
1970	0.971	0.930
1530	0.995	0.988
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.995
500	0.996	0.990
460	0.993	0.983
436	0.993	0.982
420	0.994	0.984
405	0.994	0.985
400	0.994	0.984
390	0.992	0.979
380	0.988	0.970
370	0.976	0.940
365	0.967	0.920
350	0.910	0.780
334	0.750	0.490
320	0.500	0.180
310	0.280	0.040
300	0.100	
290	0.020	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/28
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2690
$P_{C,s}$	0.5285
$P_{d,C}$	0.3027
$P_{e,d}$	0.2384
$P_{g,F}$	0.5477
$P_{t,h}$	0.7802
$P'_{s,t}$	0.2666
$P'_{C',s}$	0.5713
$P'_{d,C'}$	0.2523
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4860
$P'_{i,h}$	0.7730

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0162
$\Delta P_{C,s}$	-0.0064
$\Delta P_{F,e}$	0.0003
$\Delta P_{g,F}$	-0.0008
$\Delta P_{i,g}$	-0.0130

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.1
T_g [°C]	659
T_{10}^{13} [°C]	659
$T_{10}^{7.6}$ [°C]	823
c_p [J/(g·K)]	0.595
λ [W/(m·K)]	0.776
ρ [g/cm ³]	3.55
E [10^3 N/mm ²]	78
μ	0.263
K [10^{-6} mm ² /N]	2.31
$HK_{0.1/20}$	550
HG	2
CR	2
FR	0
SR	2.2
AR	1
PR	2.3

N-SK2HT
607567.355 $n_d = 1.60738$ $v_d = 56.65$ $n_F - n_C = 0.010722$ $n_e = 1.60994$ $v_e = 56.37$ $n_F' - n_C' = 0.010821$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57881
$n_{1970.1}$	1970.1	1.58378
$n_{1529.6}$	1529.6	1.58914
$n_{1060.0}$	1060.0	1.59490
n_t	1014.0	1.59558
n_s	852.1	1.59847
n_f	706.5	1.60230
n_C	656.3	1.60414
$n_{C'}$	643.8	1.60465
$n_{632.8}$	632.8	1.60513
n_D	589.3	1.60729
n_d	587.6	1.60738
n_e	546.1	1.60994
n_F	486.1	1.61486
$n_{F'}$	480.0	1.61547
n_g	435.8	1.62073
n_h	404.7	1.62562
n_i	365.0	1.63398
$n_{334.1}$	334.1	1.64304
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28189012
B_2	0.257738258
B_3	0.968186040
C_1	0.00727191640
C_2	0.0242823527
C_3	110.3777730

Constants of Formula for dn/dT	
D_0	3.80E-06
D_1	1.41E-08
D_2	2.28E-11
E_0	6.44E-07
E_1	8.03E-11
λ_{TK} [μm]	0.108

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.7	4.6	5.3	1.5	2.4	3.1
+20/+40	3.6	4.5	5.3	2.3	3.1	3.9
+60/+80	4.0	4.9	5.7	2.9	3.8	4.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.590
2325	0.890	0.750
1970	0.976	0.940
1530	0.995	0.987
1060	0.998	0.996
700	0.999	0.997
660	0.998	0.996
620	0.998	0.996
580	0.999	0.997
546	0.999	0.997
500	0.998	0.995
460	0.997	0.992
436	0.996	0.991
420	0.997	0.992
405	0.996	0.991
400	0.996	0.990
390	0.994	0.986
380	0.992	0.980
370	0.987	0.968
365	0.983	0.957
350	0.955	0.890
334	0.870	0.700
320	0.650	0.350
310	0.390	0.090
300	0.130	0.000
290	0.010	
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/28
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2690
$P_{C,s}$	0.5285
$P_{d,C}$	0.3027
$P_{e,d}$	0.2384
$P_{g,F}$	0.5477
$P_{t,h}$	0.7802
$P'_{s,t}$	0.2666
$P'_{C',s}$	0.5713
$P'_{d,C'}$	0.2523
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4860
$P'_{i,h}$	0.7730

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0162
$\Delta P_{C,s}$	-0.0064
$\Delta P_{F,e}$	0.0003
$\Delta P_{g,F}$	-0.0008
$\Delta P_{i,g}$	-0.0130

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.1
T_g [°C]	659
T_{10}^{13} [°C]	659
$T_{10}^{7.6}$ [°C]	823
c_p [J/(g·K)]	0.595
λ [W/(m·K)]	0.776
ρ [g/cm ³]	3.55
E [10^3 N/mm ²]	78
μ	0.263
K [10^{-6} mm ² /N]	2.31
$HK_{0.1/20}$	550
HG	2
CR	2
FR	0
SR	2.2
AR	1
PR	2.3

N-SK4
613586.354

$n_d = 1.61272$

$v_d = 58.63$

$n_F - n_C = 0.010450$

$n_e = 1.61521$

$v_e = 58.37$

$n_{F'} - n_{C'} = 0.010541$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58282
$n_{1970.1}$	1970.1	1.58835
$n_{1529.6}$	1529.6	1.59422
$n_{1060.0}$	1060.0	1.60032
n_t	1014.0	1.60102
n_s	852.1	1.60393
n_f	706.5	1.60774
n_C	656.3	1.60954
$n_{C'}$	643.8	1.61005
$n_{632.8}$	632.8	1.61052
n_D	589.3	1.61262
n_d	587.6	1.61272
n_e	546.1	1.61521
n_F	486.1	1.61999
$n_{F'}$	480.0	1.62059
n_g	435.8	1.62568
n_h	404.7	1.63042
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.32993741
B_2	0.228542996
B_3	0.988465211
C_1	0.00716874107
C_2	0.0246455892
C_3	100.8863640

Constants of Formula for dn/dT	
D_0	7.96E-07
D_1	1.30E-08
D_2	-1.31E-11
E_0	4.36E-07
E_1	6.01E-10
λ_{TK} [μm]	0.179

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.0	2.6	3.1	-0.1	0.4	0.9
+20/+40	2.1	2.8	3.4	0.7	1.4	2.0
+60/+80	2.3	3.0	3.7	1.2	1.9	2.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.390
2325	0.830	0.620
1970	0.959	0.900
1530	0.991	0.977
1060	0.997	0.993
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.994	0.985
436	0.993	0.983
420	0.993	0.983
405	0.992	0.979
400	0.990	0.975
390	0.984	0.960
380	0.971	0.930
370	0.950	0.870
365	0.930	0.830
350	0.820	0.610
334	0.530	0.200
320	0.100	
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2792
$P_{C,s}$	0.5366
$P_{d,C}$	0.3039
$P_{e,d}$	0.2384
$P_{g,F}$	0.5448
$P_{t,h}$	
$P'_{s,t}$	0.2768
$P'_{C',s}$	0.5799
$P'_{d,C'}$	0.2533
$P'_{e,d}$	0.2364
$P'_{g,F'}$	0.4835
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0073
$\Delta P_{C,s}$	-0.0030
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	-0.0004
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	658
T_{10}^{13} [°C]	646
$T_{10}^{7.6}$ [°C]	769
c_p [J/(g·K)]	0.570
λ [W/(m·K)]	0.830
ρ [g/cm ³]	3.54
E [10^3 N/mm ²]	84
μ	0.261
K [10^{-6} mm ² /N]	1.92
$HK_{0.1/20}$	580
HG	3
CR	3
FR	1
SR	51.2
AR	2
PR	2

N-SK5
589613.330 $n_d = 1.58913$ $v_d = 61.27$ $n_F - n_C = 0.009616$ $n_e = 1.59142$ $v_e = 61.02$ $n_{F'} - n_{C'} = 0.009692$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.55966
$n_{1970.1}$	1970.1	1.56539
$n_{1529.6}$	1529.6	1.57140
$n_{1060.0}$	1060.0	1.57747
n_t	1014.0	1.57815
n_s	852.1	1.58094
n_f	706.5	1.58451
n_C	656.3	1.58619
$n_{C'}$	643.8	1.58666
$n_{632.8}$	632.8	1.58710
n_D	589.3	1.58904
n_d	587.6	1.58913
n_e	546.1	1.59142
n_F	486.1	1.59581
$n_{F'}$	480.0	1.59635
n_g	435.8	1.60100
n_h	404.7	1.60530
n_i	365.0	1.61260
$n_{334.1}$	334.1	1.62043
$n_{312.6}$	312.6	1.62759
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.99146382
B_2	0.495982121
B_3	0.987393925
C_1	0.00522730467
C_2	0.0172733646
C_3	98.3594579

Constants of Formula for dn/dT	
D_0	3.50E-06
D_1	1.22E-08
D_2	6.38E-11
E_0	2.46E-07
E_1	-3.34E-11
λ_{TK} [μm]	0.278

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.5	4.0	4.6	1.4	1.9	2.4
+20/+40	3.2	3.7	4.3	1.9	2.3	2.9
+60/+80	3.6	4.1	4.7	2.6	3.0	3.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.680	0.380
2325	0.840	0.640
1970	0.963	0.910
1530	0.992	0.980
1060	0.999	0.997
700	0.998	0.995
660	0.998	0.994
620	0.997	0.993
580	0.998	0.995
546	0.998	0.996
500	0.998	0.994
460	0.996	0.989
436	0.995	0.987
420	0.994	0.986
405	0.993	0.983
400	0.992	0.981
390	0.988	0.971
380	0.984	0.960
370	0.976	0.940
365	0.971	0.930
350	0.920	0.820
334	0.800	0.580
320	0.590	0.270
310	0.400	0.100
300	0.210	0.020
290	0.090	
280	0.030	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2904
$P_{C,s}$	0.5460
$P_{d,C}$	0.3055
$P_{e,d}$	0.2386
$P_{g,F}$	0.5400
$P_{t,h}$	0.7591
$P'_{s,t}$	0.2881
$P'_{C',s}$	0.5901
$P'_{d,C'}$	0.2547
$P'_{e,d}$	0.2367
$P'_{g,F'}$	0.4796
$P'_{i,h}$	0.7531

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0008
$\Delta P_{C,s}$	0.0003
$\Delta P_{F,e}$	-0.0002
$\Delta P_{g,F}$	-0.0007
$\Delta P_{i,g}$	-0.0045

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.5
T_g [°C]	660
T_{10}^{13} [°C]	657
$T_{10}^{7.6}$ [°C]	791
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.990
ρ [g/cm ³]	3.30
E [10^3 N/mm ²]	84
μ	0.256
K [10^{-6} mm ² /N]	2.16
$HK_{0.1/20}$	590
HG	3
CR	3
FR	1
SR	4.4
AR	2
PR	1.3

N-SK11
564608.308

 $n_d = 1.56384$ $v_d = 60.80$ $n_F - n_C = 0.009274$ $n_e = 1.56605$ $v_e = 60.55$ $n_F' - n_C' = 0.009349$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.53598
$n_{1970.1}$	1970.1	1.54131
$n_{1529.6}$	1529.6	1.54693
$n_{1060.0}$	1060.0	1.55266
n_t	1014.0	1.55330
n_s	852.1	1.55597
n_f	706.5	1.55939
n_C	656.3	1.56101
$n_{C'}$	643.8	1.56146
$n_{632.8}$	632.8	1.56188
n_D	589.3	1.56376
n_d	587.6	1.56384
n_e	546.1	1.56605
n_F	486.1	1.57028
$n_{F'}$	480.0	1.57081
n_g	435.8	1.57530
n_h	404.7	1.57946
n_i	365.0	1.58653
$n_{334.1}$	334.1	1.59414
$n_{312.6}$	312.6	1.60110
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.17963631
B_2	0.229817295
B_3	0.935789652
C_1	0.00680282081
C_2	0.0219737205
C_3	101.5132320

Constants of Formula for dn/dT	
D_0	2.14E-06
D_1	1.27E-08
D_2	-7.21E-11
E_0	3.51E-07
E_1	5.41E-10
λ_{TK} [μm]	0.238

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	2.8	3.4	0.3	0.7	1.2
+20/+40	2.6	3.2	3.8	1.2	1.8	2.4
+60/+80	2.5	3.2	3.9	1.5	2.1	2.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.540
2325	0.880	0.730
1970	0.967	0.920
1530	0.994	0.984
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.999	0.997
500	0.998	0.994
460	0.996	0.990
436	0.995	0.988
420	0.994	0.985
405	0.992	0.980
400	0.990	0.975
390	0.988	0.970
380	0.985	0.963
370	0.980	0.950
365	0.976	0.940
350	0.950	0.880
334	0.870	0.710
320	0.700	0.410
310	0.480	0.160
300	0.210	0.020
290	0.060	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2874
$P_{C,s}$	0.5436
$P_{d,C}$	0.3051
$P_{e,d}$	0.2385
$P_{g,F}$	0.5411
$P_{t,h}$	0.7626
$P'_{s,t}$	0.2850
$P'_{C',s}$	0.5875
$P'_{d,C'}$	0.2544
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4805
$P'_{i,h}$	0.7564

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0024
$\Delta P_{C,s}$	-0.0011
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	-0.0004
$\Delta P_{i,g}$	-0.0037

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.6
T_g [°C]	610
T_{10}^{13} [°C]	601
$T_{10}^{7.6}$ [°C]	760
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm ³]	3.08
E [10^3 N/mm ²]	79
μ	0.239
K [10^{-6} mm ² /N]	2.45
$HK_{0.1/20}$	570
HG	2
CR	2
FR	0
SR	2
AR	1
PR	2.3

N-SK14
603606.344

 $n_d = 1.60311$ $v_d = 60.60$ $n_F - n_C = 0.009953$ $n_e = 1.60548$ $v_e = 60.34$ $n_{F'} - n_{C'} = 0.010034$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57336
$n_{1970.1}$	1970.1	1.57903
$n_{1529.6}$	1529.6	1.58502
$n_{1060.0}$	1060.0	1.59113
n_t	1014.0	1.59182
n_s	852.1	1.59467
n_f	706.5	1.59834
n_C	656.3	1.60008
$n_{C'}$	643.8	1.60056
$n_{632.8}$	632.8	1.60101
n_D	589.3	1.60302
n_d	587.6	1.60311
n_e	546.1	1.60548
n_F	486.1	1.61003
$n_{F'}$	480.0	1.61059
n_g	435.8	1.61542
n_h	404.7	1.61988
n_i	365.0	1.62748
$n_{334.1}$	334.1	1.63564
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	0.93615537
B_2	0.594052018
B_3	1.043745830
C_1	0.00461716525
C_2	0.0168859270
C_3	103.7362650

Constants of Formula for dn/dT	
D_0	1.58E-06
D_1	1.22E-08
D_2	-8.04E-12
E_0	4.46E-07
E_1	5.22E-10
λ_{TK} [μm]	0.150

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.5	3.0	3.5	0.3	0.8	1.3
+20/+40	2.4	3.1	3.7	1.1	1.7	2.3
+60/+80	2.6	3.3	4.0	1.5	2.2	2.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.680	0.380
2325	0.830	0.630
1970	0.959	0.900
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.995
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.995	0.988
436	0.994	0.985
420	0.993	0.983
405	0.991	0.978
400	0.990	0.975
390	0.988	0.970
380	0.981	0.952
370	0.971	0.930
365	0.963	0.910
350	0.910	0.790
334	0.770	0.520
320	0.550	0.220
310	0.350	0.070
300	0.160	
290	0.040	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	35/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2864
$P_{C,s}$	0.5427
$P_{d,C}$	0.3049
$P_{e,d}$	0.2385
$P_{g,F}$	0.5415
$P_{t,h}$	0.7631
$P'_{s,t}$	0.2841
$P'_{C',s}$	0.5865
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4808
$P'_{i,h}$	0.7569

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0033
$\Delta P_{C,s}$	-0.0015
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	-0.0003
$\Delta P_{i,g}$	-0.0044

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	649
T_{10}^{13} [°C]	638
$T_{10}^{7.6}$ [°C]	773
c_p [J/(g·K)]	0.636
λ [W/(m·K)]	0.851
ρ [g/cm ³]	3.44
E [10^3 N/mm ²]	86
μ	0.261
K [10^{-6} mm ² /N]	2.00
$HK_{0.1/20}$	600
HG	3
CR	4
FR	2
SR	51.3
AR	2
PR	2.3

N-SK16
620603.358 $n_d = 1.62041$ $v_d = 60.32$ $n_F - n_C = 0.010285$ $n_e = 1.62286$ $v_e = 60.08$ $n_F' - n_C' = 0.010368$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58919
$n_{1970.1}$	1970.1	1.59523
$n_{1529.6}$	1529.6	1.60157
$n_{1060.0}$	1060.0	1.60799
n_t	1014.0	1.60871
n_s	852.1	1.61167
n_f	706.5	1.61548
n_C	656.3	1.61727
$n_{C'}$	643.8	1.61777
$n_{632.8}$	632.8	1.61824
n_D	589.3	1.62032
n_d	587.6	1.62041
n_e	546.1	1.62286
n_F	486.1	1.62756
$n_{F'}$	480.0	1.62814
n_g	435.8	1.63312
n_h	404.7	1.63773
n_i	365.0	1.64559
$n_{334.1}$	334.1	1.65403
$n_{312.6}$	312.6	1.66178
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.34317774
B_2	0.241144399
B_3	0.994317969
C_1	0.00704687339
C_2	0.0229005000
C_3	92.7508526

Constants of Formula for dn/dT	
D_0	-2.37E-08
D_1	1.32E-08
D_2	-1.29E-11
E_0	4.09E-07
E_1	5.17E-10
λ_{TK} [μm]	0.170

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.6	2.2	2.6	-0.5	-0.1	0.4
+20/+40	1.7	2.3	2.9	0.3	0.9	1.4
+60/+80	1.9	2.6	3.2	0.8	1.5	2.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.580	0.260
2325	0.780	0.540
1970	0.950	0.880
1530	0.989	0.973
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.998	0.994
546	0.998	0.994
500	0.996	0.991
460	0.994	0.984
436	0.992	0.981
420	0.992	0.979
405	0.990	0.974
400	0.988	0.970
390	0.982	0.956
380	0.971	0.930
370	0.954	0.890
365	0.940	0.860
350	0.870	0.700
334	0.690	0.400
320	0.410	0.110
310	0.210	0.020
300	0.060	
290	0.010	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	36/30
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2885
$P_{C,s}$	0.5443
$P_{d,C}$	0.3051
$P_{e,d}$	0.2385
$P_{g,F}$	0.5412
$P_{t,h}$	0.7633
$P'_{s,t}$	0.2861
$P'_{C',s}$	0.5882
$P'_{d,C'}$	0.2544
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4805
$P'_{i,h}$	0.7572

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0016
$\Delta P_{C,s}$	0.0007
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0011
$\Delta P_{i,g}$	-0.0067

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	636
T_{10}^{13} [°C]	633
$T_{10}^{7.6}$ [°C]	750
c_p [J/(g·K)]	0.578
λ [W/(m·K)]	0.818
ρ [g/cm ³]	3.58
E [10^3 N/mm ²]	89
μ	0.264
K [10^{-6} mm ² /N]	1.90
$HK_{0.1/20}$	600
HG	4
CR	4
FR	4
SR	53.3
AR	3.3
PR	3.2

P-SK57
587596.301 $n_d = 1.58700$ $v_d = 59.60$ $n_F - n_C = 0.009849$ $n_e = 1.58935$ $v_e = 59.36$ $n_{F'} - n_{C'} = 0.009928$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.55688
$n_{1970.1}$	1970.1	1.56271
$n_{1529.6}$	1529.6	1.56885
$n_{1060.0}$	1060.0	1.57507
n_t	1014.0	1.57576
n_s	852.1	1.57862
n_f	706.5	1.58227
n_C	656.3	1.58399
$n_{C'}$	643.8	1.58447
$n_{632.8}$	632.8	1.58492
n_D	589.3	1.58691
n_d	587.6	1.58700
n_e	546.1	1.58935
n_F	486.1	1.59384
$n_{F'}$	480.0	1.59440
n_g	435.8	1.59917
n_h	404.7	1.60359
n_i	365.0	1.61112
$n_{334.1}$	334.1	1.61923
$n_{312.6}$	312.6	1.62669
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.31053414
B_2	0.169376189
B_3	1.109877140
C_1	0.00740877235
C_2	0.0254563489
C_3	107.7510870

Constants of Formula for dn/dT	
D_0	2.60E-06
D_1	9.40E-09
D_2	-2.30E-11
E_0	4.90E-07
E_1	5.96E-10
λ_{TK} [μm]	0.178

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.7	4.2	0.9	1.5	2.0
+20/+40	2.9	3.6	4.3	1.5	2.2	2.9
+60/+80	2.9	3.7	4.4	1.8	2.6	3.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.400
2325	0.830	0.630
1970	0.954	0.890
1530	0.991	0.978
1060	0.999	0.997
700	0.999	0.997
660	0.999	0.997
620	0.999	0.997
580	0.999	0.997
546	0.999	0.997
500	0.998	0.995
460	0.996	0.991
436	0.996	0.989
420	0.995	0.987
405	0.994	0.985
400	0.994	0.984
390	0.992	0.980
380	0.989	0.973
370	0.984	0.960
365	0.980	0.950
350	0.950	0.870
334	0.820	0.610
320	0.480	0.160
310	0.120	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	34/31
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2902
$P_{C,s}$	0.5454
$P_{d,C}$	0.3053
$P_{e,d}$	0.2385
$P_{g,F}$	0.5412
$P_{t,h}$	0.7644
$P'_{s,t}$	0.2878
$P'_{C',s}$	0.5894
$P'_{d,C'}$	0.2545
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4806
$P'_{i,h}$	0.7583

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0079
$\Delta P_{C,s}$	0.0036
$\Delta P_{F,e}$	-0.0008
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	-0.0115

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.9
T_g [°C]	493
T_{10}^{13} [°C]	494
$T_{10}^{7.6}$ [°C]	593
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.010
AT [°C]	522
ρ [g/cm ³]	3.01
E [10^3 N/mm ²]	93
μ	0.249
K [10^{-6} mm ² /N]	2.17
HK _{0.1/20}	535
HG	3
Abrasion Aa	124
CR	4
FR	3
SR	52.3
AR	2
PR	3
SR-J	4
WR-J	1

P-SK57Q1
586595.301

 $n_d = 1.58600$ $v_d = 59.50$ $n_F - n_C = 0.009849$ $n_e = 1.58835$ $v_e = 59.26$ $n_{F'} - n_{C'} = 0.009928$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.55583
$n_{1970.1}$	1970.1	1.56169
$n_{1529.6}$	1529.6	1.56784
$n_{1060.0}$	1060.0	1.57407
n_t	1014.0	1.57476
n_s	852.1	1.57762
n_f	706.5	1.58127
n_C	656.3	1.58299
$n_{C'}$	643.8	1.58347
$n_{632.8}$	632.8	1.58392
n_D	589.3	1.58591
n_d	587.6	1.58600
n_e	546.1	1.58835
n_F	486.1	1.59284
$n_{F'}$	480.0	1.59340
n_g	435.8	1.59817
n_h	404.7	1.60260
n_i	365.0	1.61013
$n_{334.1}$	334.1	1.61826
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.30536483
B_2	0.171434328
B_3	1.101172190
C_1	0.00736408831
C_2	0.0255786047
C_3	106.7260600

Constants of Formula for dn/dT	
D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [μm]	

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20						
+20/+40						
+60/+80						

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.400
2325	0.830	0.630
1970	0.954	0.890
1530	0.991	0.978
1060	0.999	0.997
700	0.999	0.997
660	0.999	0.997
620	0.999	0.997
580	0.999	0.997
546	0.999	0.997
500	0.998	0.995
460	0.996	0.991
436	0.996	0.989
420	0.995	0.987
405	0.994	0.985
400	0.994	0.984
390	0.992	0.980
380	0.989	0.973
370	0.984	0.960
365	0.980	0.950
350	0.950	0.870
334	0.820	0.610
320	0.480	0.160
310	0.120	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2903
$P_{C,s}$	0.5454
$P_{d,C}$	0.3052
$P_{e,d}$	0.2385
$P_{g,F}$	0.5414
$P_{t,h}$	0.7652
$P'_{s,t}$	0.2880
$P'_{C',s}$	0.5894
$P'_{d,C'}$	0.2545
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4807
$P'_{i,h}$	0.7590

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0085
$\Delta P_{C,s}$	0.0038
$\Delta P_{F,e}$	-0.0008
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	-0.0113

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.9
T_g [°C]	493
T_{10}^{13} [°C]	494
$T_{10}^{7.6}$ [°C]	593
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.010
AT [°C]	522
ρ [g/cm ³]	3.01
E [10^3 N/mm ²]	93
μ	0.249
K [10^{-6} mm ² /N]	2.17
HK _{0.1/20}	535
HG	3
Abrasion Aa	124
CR	4
FR	3
SR	52.3
AR	2
PR	3
SR-J	4
WR-J	1

P-SK58A
589612.297

 $n_d = 1.58913$ $v_d = 61.15$ $n_F - n_C = 0.009634$ $n_e = 1.59143$ $v_e = 60.93$ $n_{F'} - n_{C'} = 0.009707$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.55820
$n_{1970.1}$	1970.1	1.56439
$n_{1529.6}$	1529.6	1.57086
$n_{1060.0}$	1060.0	1.57728
n_t	1014.0	1.57799
n_s	852.1	1.58086
n_f	706.5	1.58449
n_C	656.3	1.58618
$n_{C'}$	643.8	1.58665
$n_{632.8}$	632.8	1.58709
n_D	589.3	1.58904
n_d	587.6	1.58913
n_e	546.1	1.59143
n_F	486.1	1.59581
$n_{F'}$	480.0	1.59636
n_g	435.8	1.60100
n_h	404.7	1.60530
n_i	365.0	1.61260
$n_{334.1}$	334.1	1.62045
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.31678410
B_2	0.171154756
B_3	1.125014730
C_1	0.00720717498
C_2	0.0245659595
C_3	102.7397280

Constants of Formula for dn/dT	
D_0	3.16E-06
D_1	1.23E-08
D_2	-1.08E-11
E_0	4.41E-07
E_1	3.20E-10
λ_{TK} [μm]	0.176

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.2	3.8	4.4	1.0	1.6	2.2
+20/+40	3.2	3.8	4.4	1.8	2.4	3.0
+60/+80	3.3	4.0	4.7	2.2	2.9	3.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.550	0.220
2325	0.750	0.480
1970	0.920	0.820
1530	0.984	0.961
1060	0.996	0.991
700	0.995	0.988
660	0.995	0.988
620	0.996	0.989
580	0.997	0.992
546	0.998	0.994
500	0.997	0.993
460	0.996	0.989
436	0.995	0.987
420	0.994	0.986
405	0.994	0.985
400	0.994	0.984
390	0.991	0.977
380	0.986	0.965
370	0.980	0.950
365	0.971	0.930
350	0.920	0.820
334	0.750	0.490
320	0.360	0.080
310	0.070	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	35/31
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2982
$P_{C,s}$	0.5519
$P_{d,C}$	0.3062
$P_{e,d}$	0.2386
$P_{g,F}$	0.5386
$P_{t,h}$	0.7578
$P'_{s,t}$	0.2959
$P'_{C',s}$	0.5963
$P'_{d,C'}$	0.2554
$P'_{e,d}$	0.2368
$P'_{g,F'}$	0.4784
$P'_{i,h}$	0.7521

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0150
$\Delta P_{C,s}$	0.0065
$\Delta P_{F,e}$	-0.0010
$\Delta P_{g,F}$	-0.0023
$\Delta P_{i,g}$	-0.0080

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	510
T_{10}^{13} [°C]	510
$T_{10}^{7.6}$ [°C]	608
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.020
AT [°C]	551
ρ [g/cm ³]	2.97
E [10^3 N/mm ²]	97
μ	0.245
K [10^{-6} mm ² /N]	2.12
HK _{0.1/20}	662
Abrasion Aa	102
CR	
FR	
SR	
AR	
PR	
SR-J	4
WR-J	2

P-SK60
610579.308 $n_d = 1.61035$ $v_d = 57.90$ $n_F - n_C = 0.010541$ $n_e = 1.61286$ $v_e = 57.66$ $n_{F'} - n_{C'} = 0.010628$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57831
$n_{1970.1}$	1970.1	1.58450
$n_{1529.6}$	1529.6	1.59102
$n_{1060.0}$	1060.0	1.59762
n_t	1014.0	1.59836
n_s	852.1	1.60140
n_f	706.5	1.60530
n_C	656.3	1.60714
$n_{C'}$	643.8	1.60765
$n_{632.8}$	632.8	1.60813
n_D	589.3	1.61026
n_d	587.6	1.61035
n_e	546.1	1.61286
n_F	486.1	1.61768
$n_{F'}$	480.0	1.61828
n_g	435.8	1.62340
n_h	404.7	1.62815
n_i	365.0	1.63627
$n_{334.1}$	334.1	1.64506
$n_{312.6}$	312.6	1.65317
$n_{296.7}$	296.7	1.66061
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.40790442
B_2	0.143381417
B_3	1.165139470
C_1	0.00784382378
C_2	0.0287769365
C_3	105.3733970

Constants of Formula for dn/dT	
D_0	2.41E-06
D_1	9.52E-09
D_2	-8.08E-12
E_0	4.72E-07
E_1	6.22E-10
λ_{TK} [μm]	0.193

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.7	4.3	0.9	1.5	2.1
+20/+40	2.9	3.6	4.3	1.5	2.3	2.9
+60/+80	2.9	3.8	4.5	1.8	2.7	3.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.400
2325	0.830	0.630
1970	0.959	0.900
1530	0.993	0.983
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.996
620	0.998	0.996
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.995
436	0.998	0.994
420	0.998	0.994
405	0.997	0.993
400	0.997	0.992
390	0.995	0.988
380	0.993	0.983
370	0.990	0.974
365	0.987	0.967
350	0.967	0.920
334	0.910	0.780
320	0.750	0.480
310	0.480	0.160
300	0.150	0.010
290	0.010	0.000
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2887
$P_{C,s}$	0.5438
$P_{d,C}$	0.3049
$P_{e,d}$	0.2384
$P_{g,F}$	0.5427
$P_{t,h}$	0.7702
$P'_{s,t}$	0.2863
$P'_{C',s}$	0.5876
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4819
$P'_{i,h}$	0.7639

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0128
$\Delta P_{C,s}$	0.0059
$\Delta P_{F,e}$	-0.0012
$\Delta P_{g,F}$	-0.0037
$\Delta P_{i,g}$	-0.0177

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.9
T_g [°C]	507
T_{10}^{13} [°C]	509
$T_{10}^{7.6}$ [°C]	606
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.130
AT [°C]	547
ρ [g/cm ³]	3.08
E [10^3 N/mm ²]	99
μ	0.253
K [10^{-6} mm ² /N]	2.04
HK _{0.1/20}	601
Abrasion Aa	86
CR	3
FR	5
SR	53.4
AR	2.3
PR	3.3
SR-J	4
WR-J	3

N-KF9
523515.250 $n_d = 1.52346$ $v_d = 51.54$ $n_F - n_C = 0.010156$ $n_e = 1.52588$ $v_e = 51.26$ $n_F' - n_C' = 0.010258$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.49608
$n_{1970.1}$	1970.1	1.50095
$n_{1529.6}$	1529.6	1.50616
$n_{1060.0}$	1060.0	1.51170
n_t	1014.0	1.51234
n_s	852.1	1.51507
n_f	706.5	1.51867
n_C	656.3	1.52040
$n_{C'}$	643.8	1.52089
$n_{632.8}$	632.8	1.52134
n_D	589.3	1.52337
n_d	587.6	1.52346
n_e	546.1	1.52588
n_F	486.1	1.53056
$n_{F'}$	480.0	1.53114
n_g	435.8	1.53620
n_h	404.7	1.54096
n_i	365.0	1.54925
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.19286778
B_2	0.089334657
B_3	0.920819805
C_1	0.00839154696
C_2	0.0404010786
C_3	112.5724460

Constants of Formula for dn/dT	
D_0	-1.66E-06
D_1	8.44E-09
D_2	-1.01E-11
E_0	6.10E-07
E_1	6.96E-10
λ_{TK} [μm]	0.217

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.1	1.9	2.6	-0.9	-0.2	0.5
+20/+40	0.9	1.8	2.6	-0.4	0.4	1.3
+60/+80	0.9	1.8	2.8	-0.1	0.8	1.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.620	0.300
2325	0.710	0.430
1970	0.890	0.740
1530	0.992	0.981
1060	0.998	0.995
700	0.999	0.997
660	0.998	0.995
620	0.998	0.994
580	0.998	0.996
546	0.998	0.996
500	0.998	0.994
460	0.996	0.990
436	0.995	0.988
420	0.994	0.985
405	0.990	0.975
400	0.986	0.965
390	0.976	0.940
380	0.950	0.880
370	0.900	0.770
365	0.860	0.680
350	0.540	0.210
334	0.030	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2683
$P_{C,s}$	0.5249
$P_{d,C}$	0.3012
$P_{e,d}$	0.2380
$P_{g,F}$	0.5558
$P_{t,h}$	0.8161
$P'_{s,t}$	0.2657
$P'_{C',s}$	0.5669
$P'_{d,C'}$	0.2509
$P'_{e,d}$	0.2356
$P'_{g,F'}$	0.4930
$P'_{i,h}$	0.8080

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0038
$\Delta P_{C,s}$	0.0018
$\Delta P_{F,e}$	-0.0004
$\Delta P_{g,F}$	-0.0014
$\Delta P_{i,g}$	-0.0075

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	11.0
T_g [°C]	476
T_{10}^{13} [°C]	476
$T_{10}^{7.6}$ [°C]	640
c_p [J/(g·K)]	0.860
λ [W/(m·K)]	1.040
ρ [g/cm ³]	2.50
E [10^3 N/mm ²]	66
μ	0.225
K [10^{-6} mm ² /N]	2.74
$HK_{0.1/20}$	480
HG	1
CR	1
FR	0
SR	1
AR	1
PR	1

N-SSK2
622533.353

 $n_d = 1.62229$ $v_d = 53.27$ $n_F - n_C = 0.011681$ $n_e = 1.62508$ $v_e = 52.99$ $n_F' - n_C' = 0.011795$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.59149
$n_{1970.1}$	1970.1	1.59685
$n_{1529.6}$	1529.6	1.60260
$n_{1060.0}$	1060.0	1.60880
n_t	1014.0	1.60953
n_s	852.1	1.61264
n_f	706.5	1.61678
n_C	656.3	1.61877
$n_{C'}$	643.8	1.61933
$n_{632.8}$	632.8	1.61985
n_D	589.3	1.62219
n_d	587.6	1.62229
n_e	546.1	1.62508
n_F	486.1	1.63045
$n_{F'}$	480.0	1.63112
n_g	435.8	1.63691
n_h	404.7	1.64232
n_i	365.0	1.65166
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.43060270
B_2	0.153150554
B_3	1.013909040
C_1	0.00823982975
C_2	0.0333736841
C_3	106.8708220

Constants of Formula for dn/dT	
D_0	5.21E-06
D_1	1.34E-08
D_2	-1.01E-11
E_0	5.21E-07
E_1	5.87E-10
λ_{TK} [μm]	0.199

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.2	5.0	5.8	2.1	2.8	3.5
+20/+40	4.3	5.2	6.1	2.9	3.8	4.6
+60/+80	4.5	5.5	6.4	3.5	4.4	5.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.500
2325	0.880	0.720
1970	0.971	0.930
1530	0.992	0.981
1060	0.997	0.992
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.994	0.985
436	0.992	0.980
420	0.990	0.975
405	0.985	0.963
400	0.981	0.954
390	0.967	0.920
380	0.940	0.860
370	0.890	0.750
365	0.850	0.670
350	0.570	0.250
334	0.080	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2661
$P_{C,s}$	0.5246
$P_{d,C}$	0.3016
$P_{e,d}$	0.2381
$P_{g,F}$	0.5526
$P_{t,h}$	0.7997
$P'_{s,t}$	0.2636
$P'_{C',s}$	0.5669
$P'_{d,C'}$	0.2513
$P'_{e,d}$	0.2358
$P'_{g,F'}$	0.4902
$P'_{i,h}$	0.7920

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0069
$\Delta P_{C,s}$	-0.0025
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0016
$\Delta P_{i,g}$	-0.0146

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.7
T_g [°C]	653
T_{10}^{13} [°C]	655
$T_{10}^{7.6}$ [°C]	801
c_p [J/(g·K)]	0.580
λ [W/(m·K)]	0.810
ρ [g/cm ³]	3.53
E [10^3 N/mm ²]	82
μ	0.261
K [10^{-6} mm ² /N]	2.51
$HK_{0.1/20}$	570
HG	3
CR	1
FR	0
SR	1.2
AR	1
PR	1

N-SSK5
658509.371

 $n_d = 1.65844$ $v_d = 50.88$ $n_F - n_C = 0.012940$ $n_e = 1.66152$ $v_e = 50.59$ $n_{F'} - n_{C'} = 0.013075$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.62581
$n_{1970.1}$	1970.1	1.63128
$n_{1529.6}$	1529.6	1.63720
$n_{1060.0}$	1060.0	1.64371
n_t	1014.0	1.64450
n_s	852.1	1.64785
n_f	706.5	1.65237
n_C	656.3	1.65455
$n_{C'}$	643.8	1.65517
$n_{632.8}$	632.8	1.65574
n_D	589.3	1.65833
n_d	587.6	1.65844
n_e	546.1	1.66152
n_F	486.1	1.66749
$n_{F'}$	480.0	1.66824
n_g	435.8	1.67471
n_h	404.7	1.68079
n_i	365.0	1.69139
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.59222659
B_2	0.103520774
B_3	1.051740160
C_1	0.00920284626
C_2	0.0423530072
C_3	106.9273740

Constants of Formula for dn/dT	
D_0	7.29E-07
D_1	1.17E-08
D_2	-1.50E-11
E_0	6.08E-07
E_1	7.66E-10
λ_{TK} [μm]	0.189

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.2	3.0	3.9	0.0	0.8	1.6
+20/+40	2.2	3.2	4.2	0.8	1.8	2.7
+60/+80	2.4	3.5	4.5	1.2	2.3	3.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.450
2325	0.850	0.660
1970	0.963	0.910
1530	0.992	0.980
1060	0.996	0.990
700	0.997	0.993
660	0.997	0.992
620	0.997	0.992
580	0.997	0.993
546	0.996	0.990
500	0.993	0.982
460	0.987	0.968
436	0.982	0.956
420	0.976	0.940
405	0.963	0.910
400	0.959	0.900
390	0.940	0.860
380	0.900	0.760
370	0.800	0.580
365	0.730	0.450
350	0.340	0.060
334	0.020	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	38/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2592
$P_{C,s}$	0.5181
$P_{d,C}$	0.3003
$P_{e,d}$	0.2380
$P_{g,F}$	0.5575
$P_{t,h}$	0.8192
$P'_{s,t}$	0.2566
$P'_{C',s}$	0.5598
$P'_{d,C'}$	0.2502
$P'_{e,d}$	0.2355
$P'_{g,F'}$	0.4944
$P'_{i,h}$	0.8108

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0090
$\Delta P_{C,s}$	-0.0034
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	-0.0007
$\Delta P_{i,g}$	-0.0081

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.0
T_g [°C]	645
T_{10}^{13} [°C]	637
$T_{10}^{7.6}$ [°C]	751
c_p [J/(g·K)]	0.574
λ [W/(m·K)]	
ρ [g/cm ³]	3.71
E [10^3 N/mm ²]	88
μ	0.278
K [10^{-6} mm ² /N]	1.90
$HK_{0.1/20}$	590
HG	5
CR	2
FR	3
SR	52.2
AR	2.2
PR	3.2

N-SSK8
618498.327

 $n_d = 1.61773$ $v_d = 49.83$ $n_F - n_C = 0.012397$ $n_e = 1.62068$ $v_e = 49.54$ $n_{F'} - n_{C'} = 0.012529$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58594
$n_{1970.1}$	1970.1	1.59137
$n_{1529.6}$	1529.6	1.59723
$n_{1060.0}$	1060.0	1.60360
n_t	1014.0	1.60436
n_s	852.1	1.60759
n_f	706.5	1.61192
n_C	656.3	1.61401
$n_{C'}$	643.8	1.61460
$n_{632.8}$	632.8	1.61515
n_D	589.3	1.61762
n_d	587.6	1.61773
n_e	546.1	1.62068
n_F	486.1	1.62641
$n_{F'}$	480.0	1.62713
n_g	435.8	1.63335
n_h	404.7	1.63923
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.44857867
B_2	0.117965926
B_3	1.069375280
C_1	0.00869310149
C_2	0.0421566593
C_3	111.3006660

Constants of Formula for dn/dT	
D_0	5.34E-07
D_1	1.27E-08
D_2	-1.75E-11
E_0	5.40E-07
E_1	7.05E-10
λ_{TK} [μm]	0.224

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.9	2.7	3.5	-0.2	0.5	1.3
+20/+40	2.0	2.9	3.9	0.6	1.5	2.4
+60/+80	2.2	3.2	4.2	1.1	2.1	3.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.460
2325	0.850	0.660
1970	0.959	0.900
1530	0.992	0.980
1060	0.997	0.993
700	0.998	0.994
660	0.996	0.991
620	0.996	0.990
580	0.997	0.992
546	0.997	0.992
500	0.994	0.984
460	0.987	0.969
436	0.982	0.955
420	0.975	0.940
405	0.959	0.900
400	0.950	0.880
390	0.920	0.810
380	0.850	0.660
370	0.730	0.450
365	0.630	0.310
350	0.190	0.010
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/35
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2606
$P_{C,s}$	0.5179
$P_{d,C}$	0.2999
$P_{e,d}$	0.2378
$P_{g,F}$	0.5602
$P_{t,h}$	
$P'_{s,t}$	0.2579
$P'_{C',s}$	0.5594
$P'_{d,C'}$	0.2498
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4967
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0028
$\Delta P_{C,s}$	-0.0012
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.2
T_g [°C]	616
T_{10}^{13} [°C]	604
$T_{10}^{7.6}$ [°C]	742
c_p [J/(g·K)]	0.640
λ [W/(m·K)]	0.840
ρ [g/cm ³]	3.27
E [10^3 N/mm ²]	84
μ	0.251
K [10^{-6} mm ² /N]	2.36
$HK_{0.1/20}$	570
HG	3
CR	1
FR	0
SR	1
AR	1.3
PR	1

N-LAK7
652585.384

 $n_d = 1.65160$ $v_d = 58.52$ $n_F - n_C = 0.011135$ $n_e = 1.65425$ $v_e = 58.26$ $n_{F'} - n_{C'} = 0.011229$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.61875
$n_{1970.1}$	1970.1	1.62499
$n_{1529.6}$	1529.6	1.63156
$n_{1060.0}$	1060.0	1.63828
n_t	1014.0	1.63904
n_s	852.1	1.64220
n_f	706.5	1.64628
n_C	656.3	1.64821
$n_{C'}$	643.8	1.64875
$n_{632.8}$	632.8	1.64925
n_D	589.3	1.65150
n_d	587.6	1.65160
n_e	546.1	1.65425
n_F	486.1	1.65934
$n_{F'}$	480.0	1.65998
n_g	435.8	1.66539
n_h	404.7	1.67042
n_i	365.0	1.67897
$n_{334.1}$	334.1	1.68820
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.23679889
B_2	0.445051837
B_3	1.017458880
C_1	0.00610105538
C_2	0.0201388334
C_3	90.6380380

Constants of Formula for dn/dT	
D_0	-3.40E-06
D_1	1.17E-08
D_2	2.38E-11
E_0	4.96E-07
E_1	4.44E-10
λ_{TK} [μm]	0.107

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.2	0.8	1.3	-2.0	-1.5	-1.0
+20/+40	0.0	0.7	1.3	-1.4	-0.7	-0.2
+60/+80	0.3	1.0	1.7	-0.8	-0.1	0.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.550	0.220
2325	0.750	0.490
1970	0.940	0.860
1530	0.989	0.972
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.994	0.984
436	0.992	0.980
420	0.991	0.977
405	0.989	0.973
400	0.988	0.970
390	0.984	0.961
380	0.978	0.950
370	0.966	0.920
365	0.956	0.890
350	0.910	0.790
334	0.800	0.570
320	0.620	0.300
310	0.420	0.110
300	0.190	0.020
290	0.050	0.000
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	35/29
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2835
$P_{C,s}$	0.5400
$P_{d,C}$	0.3044
$P_{e,d}$	0.2385
$P_{g,F}$	0.5433
$P_{t,h}$	0.7687
$P'_{s,t}$	0.2812
$P'_{C',s}$	0.5836
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4823
$P'_{i,h}$	0.7622

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0010
$\Delta P_{C,s}$	0.0007
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0021
$\Delta P_{i,g}$	-0.0140

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.2
T_g [°C]	618
T_{10}^{13} [°C]	626
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.740
ρ [g/cm ³]	3.84
E [10^3 N/mm ²]	90
μ	0.277
K [10^{-6} mm ² /N]	1.65
$HK_{0.1/20}$	600
HG	5
CR	3
FR	2
SR	53.3
AR	3.3
PR	4.3

N-LAK8
713538.375 $n_d = 1.71300$ $v_d = 53.83$ $n_F - n_C = 0.013245$ $n_e = 1.71616$ $v_e = 53.61$ $n_F' - n_C' = 0.013359$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67294
$n_{1970.1}$	1970.1	1.68075
$n_{1529.6}$	1529.6	1.68890
$n_{1060.0}$	1060.0	1.69710
n_t	1014.0	1.69802
n_s	852.1	1.70181
n_f	706.5	1.70668
n_C	656.3	1.70897
$n_{C'}$	643.8	1.70962
$n_{632.8}$	632.8	1.71022
n_D	589.3	1.71289
n_d	587.6	1.71300
n_e	546.1	1.71616
n_F	486.1	1.72222
$n_{F'}$	480.0	1.72297
n_g	435.8	1.72944
n_h	404.7	1.73545
n_i	365.0	1.74573
$n_{334.1}$	334.1	1.75687
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.33183167
B_2	0.546623206
B_3	1.190840150
C_1	0.00620023871
C_2	0.0216465439
C_3	82.5827736

Constants of Formula for dn/dT	
D_0	4.10E-06
D_1	1.25E-08
D_2	-1.60E-11
E_0	4.30E-07
E_1	6.29E-10
λ_{TK} [μm]	0.213

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.0	4.7	5.4	1.7	2.4	3.0
+20/+40	4.1	5.0	5.8	2.6	3.5	4.3
+60/+80	4.3	5.2	6.2	3.1	4.1	5.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.710	0.420
1970	0.950	0.880
1530	0.992	0.979
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.994
546	0.998	0.995
500	0.998	0.994
460	0.995	0.987
436	0.992	0.979
420	0.988	0.970
405	0.981	0.952
400	0.977	0.940
390	0.965	0.920
380	0.950	0.870
370	0.910	0.780
365	0.880	0.720
350	0.740	0.470
334	0.510	0.190
320	0.280	0.040
310	0.140	0.010
300	0.040	
290	0.010	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2861
$P_{C,s}$	0.5408
$P_{d,C}$	0.3042
$P_{e,d}$	0.2383
$P_{g,F}$	0.5450
$P_{t,h}$	0.7764
$P'_{s,t}$	0.2836
$P'_{C',s}$	0.5843
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2363
$P'_{g,F'}$	0.4838
$P'_{i,h}$	0.7698

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0266
$\Delta P_{C,s}$	0.0124
$\Delta P_{F,e}$	-0.0026
$\Delta P_{g,F}$	-0.0083
$\Delta P_{i,g}$	-0.0428

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.7
T_g [°C]	643
T_{10}^{13} [°C]	635
$T_{10}^{7.6}$ [°C]	717
c_p [J/(g·K)]	0.620
λ [W/(m·K)]	0.840
ρ [g/cm ³]	3.75
E [10^3 N/mm ²]	115
μ	0.289
K [10^{-6} mm ² /N]	1.81
$HK_{0.1/20}$	740
HG	2
CR	3
FR	2
SR	52.3
AR	1
PR	3.3

N-LAK9
691547.351 $n_d = 1.69100$ $v_d = 54.71$ $n_F - n_C = 0.012631$ $n_e = 1.69401$ $v_e = 54.48$ $n_F' - n_C' = 0.012738$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.65294
$n_{1970.1}$	1970.1	1.66032
$n_{1529.6}$	1529.6	1.66804
$n_{1060.0}$	1060.0	1.67584
n_t	1014.0	1.67672
n_s	852.1	1.68033
n_f	706.5	1.68497
n_C	656.3	1.68716
$n_{C'}$	643.8	1.68777
$n_{632.8}$	632.8	1.68834
n_D	589.3	1.69089
n_d	587.6	1.69100
n_e	546.1	1.69401
n_F	486.1	1.69979
$n_{F'}$	480.0	1.70051
n_g	435.8	1.70667
n_h	404.7	1.71239
n_i	365.0	1.72219
$n_{334.1}$	334.1	1.73281
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.46231905
B_2	0.344399589
B_3	1.155083720
C_1	0.00724270156
C_2	0.0243353131
C_3	85.4686868

Constants of Formula for dn/dT	
D_0	2.11E-06
D_1	1.11E-08
D_2	1.82E-12
E_0	4.74E-07
E_1	-3.47E-10
λ_{TK} [μm]	0.146

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.9	4.6	0.8	1.6	2.3
+20/+40	2.9	3.7	4.4	1.5	2.2	2.9
+60/+80	3.1	3.8	4.4	2.0	2.7	3.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.460	0.140
2325	0.710	0.420
1970	0.940	0.860
1530	0.986	0.966
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.994
546	0.998	0.994
500	0.997	0.992
460	0.994	0.984
436	0.991	0.977
420	0.988	0.970
405	0.983	0.957
400	0.980	0.950
390	0.971	0.930
380	0.954	0.890
370	0.930	0.830
365	0.910	0.780
350	0.790	0.550
334	0.530	0.200
320	0.210	0.020
310	0.070	0.000
300	0.010	
290	0.000	
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2859
$P_{C,s}$	0.5409
$P_{d,C}$	0.3043
$P_{e,d}$	0.2384
$P_{g,F}$	0.5447
$P_{t,h}$	0.7756
$P'_{s,t}$	0.2834
$P'_{C',s}$	0.5844
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2363
$P'_{g,F'}$	0.4835
$P'_{i,h}$	0.7690

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0223
$\Delta P_{C,s}$	0.0105
$\Delta P_{F,e}$	-0.0023
$\Delta P_{g,F}$	-0.0071
$\Delta P_{i,g}$	-0.0367

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.5
T_g [°C]	656
T_{10}^{13} [°C]	645
$T_{10}^{7.6}$ [°C]	722
c_p [J/(g·K)]	0.649
λ [W/(m·K)]	0.908
ρ [g/cm ³]	3.51
E [10^3 N/mm ²]	110
μ	0.285
K [10^{-6} mm ² /N]	1.83
$HK_{0.1/20}$	700
HG	3
CR	3
FR	3
SR	52
AR	1.2
PR	4.3

N-LAK10
720506.369 $n_d = 1.72003$ $v_d = 50.62$ $n_F - n_C = 0.014224$ $n_e = 1.72341$ $v_e = 50.39$ $n_F' - n_C' = 0.014357$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67890
$n_{1970.1}$	1970.1	1.68670
$n_{1529.6}$	1529.6	1.69488
$n_{1060.0}$	1060.0	1.70324
n_t	1014.0	1.70419
n_s	852.1	1.70815
n_f	706.5	1.71328
n_C	656.3	1.71572
$n_{C'}$	643.8	1.71641
$n_{632.8}$	632.8	1.71705
n_D	589.3	1.71990
n_d	587.6	1.72003
n_e	546.1	1.72341
n_F	486.1	1.72995
$n_{F'}$	480.0	1.73077
n_g	435.8	1.73779
n_h	404.7	1.74438
n_i	365.0	1.75578
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.72878017
B_2	0.169257825
B_3	1.193869560
C_1	0.00886014635
C_2	0.0363416509
C_3	82.9009069

Constants of Formula for dn/dT	
D_0	4.10E-06
D_1	1.23E-08
D_2	-7.85E-12
E_0	5.08E-07
E_1	5.76E-10
λ_{TK} [μm]	0.205

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.1	5.0	5.8	1.8	2.6	3.4
+20/+40	4.2	5.1	6.1	2.7	3.6	4.6
+60/+80	4.4	5.4	6.5	3.2	4.3	5.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.430	0.120
2325	0.720	0.440
1970	0.950	0.880
1530	0.991	0.977
1060	0.998	0.995
700	0.999	0.995
660	0.998	0.994
620	0.998	0.994
580	0.997	0.993
546	0.998	0.994
500	0.995	0.988
460	0.991	0.977
436	0.985	0.963
420	0.976	0.940
405	0.963	0.910
400	0.959	0.900
390	0.940	0.850
380	0.900	0.770
370	0.830	0.630
365	0.770	0.520
350	0.440	0.130
334	0.030	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/34

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2779
$P_{C,s}$	0.5328
$P_{d,C}$	0.3025
$P_{e,d}$	0.2381
$P_{g,F}$	0.5515
$P_{t,h}$	0.8015
$P'_{s,t}$	0.2753
$P'_{C',s}$	0.5755
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2359
$P'_{g,F'}$	0.4894
$P'_{i,h}$	0.7941

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0256
$\Delta P_{C,s}$	0.0119
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0072
$\Delta P_{i,g}$	-0.0354

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.7
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.8
T_g [°C]	636
T_{10}^{13} [°C]	631
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.640
λ [W/(m·K)]	0.860
ρ [g/cm ³]	3.69
E [10^3 N/mm ²]	116
μ	0.286
K [10^{-6} mm ² /N]	1.97
$HK_{0.1/20}$	780
HG	2
CR	2
FR	2
SR	52.3
AR	1
PR	3

N-LAK12
678552.410 $n_d = 1.67790$ $v_d = 55.20$ $n_F - n_C = 0.012281$ $n_e = 1.68083$ $v_e = 54.92$ $n_F' - n_C' = 0.012396$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.64541
$n_{1970.1}$	1970.1	1.65107
$n_{1529.6}$	1529.6	1.65713
$n_{1060.0}$	1060.0	1.66366
n_t	1014.0	1.66443
n_s	852.1	1.66772
n_f	706.5	1.67209
n_C	656.3	1.67419
$n_{C'}$	643.8	1.67478
$n_{632.8}$	632.8	1.67533
n_D	589.3	1.67779
n_d	587.6	1.67790
n_e	546.1	1.68083
n_F	486.1	1.68647
$n_{F'}$	480.0	1.68717
n_g	435.8	1.69320
n_h	404.7	1.69882
n_i	365.0	1.70842
$n_{334.1}$	334.1	1.71881
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.17365704
B_2	0.588992398
B_3	0.978014394
C_1	0.00577031797
C_2	0.0200401678
C_3	95.4873482

Constants of Formula for dn/dT	
D_0	-5.67E-06
D_1	8.27E-09
D_2	1.27E-12
E_0	5.25E-07
E_1	6.30E-10
λ_{TK} [μm]	0.162

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-1.0	-0.3	0.3	-3.2	-2.6	-2.0
+20/+40	-1.2	-0.4	0.3	-2.7	-1.9	-1.2
+60/+80	-1.2	-0.3	0.5	-2.3	-1.5	-0.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.590	0.270
2325	0.760	0.510
1970	0.940	0.850
1530	0.990	0.975
1060	0.997	0.992
700	0.997	0.993
660	0.996	0.989
620	0.995	0.988
580	0.996	0.990
546	0.996	0.991
500	0.994	0.986
460	0.987	0.968
436	0.983	0.958
420	0.981	0.952
405	0.977	0.940
400	0.976	0.940
390	0.967	0.920
380	0.950	0.870
370	0.910	0.790
365	0.880	0.730
350	0.730	0.460
334	0.470	0.150
320	0.150	0.010
310	0.030	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2673
$P_{C,s}$	0.5269
$P_{d,C}$	0.3024
$P_{e,d}$	0.2383
$P_{g,F}$	0.5485
$P_{t,h}$	0.7818
$P'_{s,t}$	0.2648
$P'_{C',s}$	0.5695
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4866
$P'_{i,h}$	0.7746

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0126
$\Delta P_{C,s}$	-0.0047
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	-0.0226

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.3
T_g [°C]	614
T_{10}^{13} [°C]	606
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.510
λ [W/(m·K)]	0.680
ρ [g/cm ³]	4.10
E [10^3 N/mm ²]	87
μ	0.288
K [10^{-6} mm ² /N]	1.44
$HK_{0.1/20}$	560
HG	6
CR	3
FR	1
SR	53.3
AR	3.3
PR	4.3

N-LAK14
697554.363

$n_d = 1.69680$

$v_d = 55.41$

$n_F - n_C = 0.012575$

$n_e = 1.69980$

$v_e = 55.19$

$n_F' - n_C' = 0.012679$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.65783
$n_{1970.1}$	1970.1	1.66554
$n_{1529.6}$	1529.6	1.67357
$n_{1060.0}$	1060.0	1.68157
n_t	1014.0	1.68246
n_s	852.1	1.68612
n_f	706.5	1.69077
n_C	656.3	1.69297
$n_{C'}$	643.8	1.69358
$n_{632.8}$	632.8	1.69415
n_D	589.3	1.69669
n_d	587.6	1.69680
n_e	546.1	1.69980
n_F	486.1	1.70554
$n_{F'}$	480.0	1.70626
n_g	435.8	1.71237
n_h	404.7	1.71804
n_i	365.0	1.72772
$n_{334.1}$	334.1	1.73819
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.50781212
B_2	0.318866829
B_3	1.142872130
C_1	0.00746098727
C_2	0.0242024834
C_3	80.9565165

Constants of Formula for dn/dT	
D_0	2.68E-06
D_1	1.15E-08
D_2	-1.44E-11
E_0	3.72E-07
E_1	5.53E-10
λ_{TK} [μm]	0.226

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.2	3.8	4.4	0.9	1.5	2.1
+20/+40	3.2	4.0	4.7	1.8	2.5	3.2
+60/+80	3.4	4.2	5.0	2.2	3.0	3.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.380	0.090
2325	0.670	0.370
1970	0.930	0.840
1530	0.984	0.960
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.997	0.992
580	0.997	0.993
546	0.998	0.995
500	0.997	0.992
460	0.994	0.984
436	0.991	0.977
420	0.988	0.971
405	0.984	0.960
400	0.981	0.953
390	0.971	0.930
380	0.959	0.900
370	0.930	0.840
365	0.910	0.800
350	0.820	0.610
334	0.640	0.330
320	0.430	0.120
310	0.240	0.040
300	0.090	0.000
290	0.020	
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	37/30
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2903
$P_{C,s}$	0.5447
$P_{d,C}$	0.3049
$P_{e,d}$	0.2384
$P_{g,F}$	0.5427
$P_{t,h}$	0.7701
$P'_{s,t}$	0.2880
$P'_{C',s}$	0.5885
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4819
$P'_{i,h}$	0.7638

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0273
$\Delta P_{C,s}$	0.0127
$\Delta P_{F,e}$	-0.0026
$\Delta P_{g,F}$	-0.0079
$\Delta P_{i,g}$	-0.0386

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.9
T_g [°C]	661
T_{10}^{13} [°C]	653
$T_{10}^{7.6}$ [°C]	734
c_p [J/(g·K)]	0.630
λ [W/(m·K)]	0.890
ρ [g/cm ³]	3.63
E [10^3 N/mm ²]	111
μ	0.283
K [10^{-6} mm ² /N]	1.73
$HK_{0.1/20}$	730
HG	2
CR	3
FR	2
SR	52.3
AR	1
PR	3

N-LAK21
640601.374 $n_d = 1.64049$ $v_d = 60.10$ $n_F - n_C = 0.010657$ $n_e = 1.64304$ $v_e = 59.86$ $n_F' - n_C' = 0.010743$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.60776
$n_{1970.1}$	1970.1	1.61416
$n_{1529.6}$	1529.6	1.62086
$n_{1060.0}$	1060.0	1.62759
n_t	1014.0	1.62834
n_s	852.1	1.63143
n_f	706.5	1.63538
n_C	656.3	1.63724
$n_{C'}$	643.8	1.63776
$n_{632.8}$	632.8	1.63825
n_D	589.3	1.64040
n_d	587.6	1.64049
n_e	546.1	1.64304
n_F	486.1	1.64790
$n_{F'}$	480.0	1.64850
n_g	435.8	1.65366
n_h	404.7	1.65844
n_i	365.0	1.66657
$n_{334.1}$	334.1	1.67532
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.22718116
B_2	0.420783743
B_3	1.012848430
C_1	0.00602075682
C_2	0.0196862889
C_3	88.4370099

Constants of Formula for dn/dT	
D_0	-2.36E-06
D_1	1.15E-08
D_2	1.11E-11
E_0	3.10E-07
E_1	2.78E-10
λ_{TK} [μm]	0.234

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.6	1.1	1.6	-1.6	-1.2	-0.7
+20/+40	0.5	1.0	1.6	-0.9	-0.4	0.1
+60/+80	0.7	1.3	1.9	-0.4	0.1	0.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.540	0.210
2325	0.750	0.490
1970	0.950	0.870
1530	0.988	0.970
1060	0.998	0.994
700	0.998	0.994
660	0.996	0.991
620	0.996	0.990
580	0.997	0.992
546	0.997	0.992
500	0.995	0.988
460	0.990	0.976
436	0.987	0.969
420	0.985	0.963
405	0.982	0.955
400	0.979	0.950
390	0.971	0.930
380	0.959	0.900
370	0.930	0.830
365	0.910	0.780
350	0.800	0.570
334	0.570	0.240
320	0.250	0.040
310	0.060	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2900
$P_{C,s}$	0.5453
$P_{d,C}$	0.3052
$P_{e,d}$	0.2385
$P_{g,F}$	0.5411
$P_{t,h}$	0.7630
$P'_{s,t}$	0.2877
$P'_{C',s}$	0.5892
$P'_{d,C'}$	0.2545
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4804
$P'_{i,h}$	0.7569

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0052
$\Delta P_{C,s}$	0.0023
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0017
$\Delta P_{i,g}$	-0.0090

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.1
T_g [°C]	639
T_{10}^{13} [°C]	627
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.590
λ [W/(m·K)]	0.880
ρ [g/cm ³]	3.74
E [10^3 N/mm ²]	91
μ	0.272
K [10^{-6} mm ² /N]	1.74
$HK_{0.1/20}$	600
HG	5
CR	4
FR	2
SR	53.2
AR	4.3
PR	4.3

N-LAK22
651559.377

 $n_d = 1.65113$ $v_d = 55.89$ $n_F - n_C = 0.011650$ $n_e = 1.65391$ $v_e = 55.63$ $n_F' - n_C' = 0.011755$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.61915
$n_{1970.1}$	1970.1	1.62488
$n_{1529.6}$	1529.6	1.63100
$n_{1060.0}$	1060.0	1.63747
n_t	1014.0	1.63823
n_s	852.1	1.64141
n_f	706.5	1.64560
n_C	656.3	1.64760
$n_{C'}$	643.8	1.64816
$n_{632.8}$	632.8	1.64868
n_D	589.3	1.65103
n_d	587.6	1.65113
n_e	546.1	1.65391
n_F	486.1	1.65925
$n_{F'}$	480.0	1.65992
n_g	435.8	1.66562
n_h	404.7	1.67092
n_i	365.0	1.67997
$n_{334.1}$	334.1	1.68975
$n_{312.6}$	312.6	1.69876
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.14229781
B_2	0.535138441
B_3	1.040883850
C_1	0.00585778594
C_2	0.0198546147
C_3	100.8340170

Constants of Formula for dn/dT	
D_0	1.36E-06
D_1	1.49E-08
D_2	-1.29E-11
E_0	3.41E-07
E_1	2.09E-10
λ_{TK} [μm]	0.262

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.2	2.9	3.6	0.0	0.6	1.3
+20/+40	2.4	3.1	3.9	1.0	1.7	2.4
+60/+80	2.7	3.4	4.2	1.6	2.3	3.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.670	0.370
2325	0.830	0.620
1970	0.959	0.900
1530	0.991	0.978
1060	0.998	0.994
700	0.998	0.994
660	0.997	0.992
620	0.996	0.991
580	0.997	0.993
546	0.997	0.993
500	0.995	0.988
460	0.992	0.980
436	0.990	0.975
420	0.989	0.973
405	0.987	0.968
400	0.985	0.964
390	0.980	0.950
380	0.967	0.920
370	0.950	0.870
365	0.930	0.840
350	0.840	0.660
334	0.660	0.350
320	0.400	0.100
310	0.210	0.020
300	0.080	
290	0.010	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2729
$P_{C,s}$	0.5314
$P_{d,C}$	0.3031
$P_{e,d}$	0.2384
$P_{g,F}$	0.5467
$P_{t,h}$	0.7771
$P'_{s,t}$	0.2704
$P'_{C',s}$	0.5744
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4851
$P'_{i,h}$	0.7702

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0058
$\Delta P_{C,s}$	-0.0018
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0031
$\Delta P_{i,g}$	-0.0236

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	689
T_{10}^{13} [°C]	673
$T_{10}^{7.6}$ [°C]	
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.750
ρ [g/cm ³]	3.77
E [10^3 N/mm ²]	90
μ	0.266
K [10^{-6} mm ² /N]	1.82
$HK_{0.1/20}$	600
HG	4
CR	2
FR	2
SR	51.2
AR	1
PR	2.3

N-LAK33B
755523.422 $n_d = 1.75500$ $v_d = 52.30$ $n_F - n_C = 0.014436$ $n_e = 1.75844$ $v_e = 52.07$ $n_F' - n_C' = 0.014566$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.71387
$n_{1970.1}$	1970.1	1.72155
$n_{1529.6}$	1529.6	1.72962
$n_{1060.0}$	1060.0	1.73796
n_t	1014.0	1.73892
n_s	852.1	1.74292
n_f	706.5	1.74814
n_C	656.3	1.75062
$n_{C'}$	643.8	1.75132
$n_{632.8}$	632.8	1.75197
n_D	589.3	1.75487
n_d	587.6	1.75500
n_e	546.1	1.75844
n_F	486.1	1.76506
$n_{F'}$	480.0	1.76589
n_g	435.8	1.77296
n_h	404.7	1.77954
n_i	365.0	1.79082
$n_{334.1}$	334.1	1.80306
$n_{312.6}$	312.6	1.81436
$n_{296.7}$	296.7	1.82471
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.42288601
B_2	0.593661336
B_3	1.161352600
C_1	0.00670283452
C_2	0.0219416210
C_3	80.7407701

Constants of Formula for dn/dT	
D_0	2.77E-06
D_1	1.24E-08
D_2	1.22E-11
E_0	5.19E-07
E_1	6.02E-10
λ_{TK} [μm]	0.184

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.5	4.4	5.2	1.2	2.0	2.8
+20/+40	3.5	4.5	5.4	2.0	3.0	3.9
+60/+80	3.9	4.9	5.9	2.7	3.7	4.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.680	0.380
1970	0.940	0.850
1530	0.985	0.963
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.997	0.993
580	0.998	0.994
546	0.998	0.995
500	0.997	0.993
460	0.994	0.986
436	0.992	0.979
420	0.988	0.971
405	0.982	0.956
400	0.980	0.950
390	0.971	0.930
380	0.954	0.890
370	0.930	0.830
365	0.910	0.790
350	0.820	0.610
334	0.660	0.350
320	0.460	0.140
310	0.280	0.030
300	0.220	0.010
290	0.120	0.000
280	0.020	
270	0.000	
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	37/28
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2768
$P_{C,s}$	0.5337
$P_{d,C}$	0.3032
$P_{e,d}$	0.2383
$P_{g,F}$	0.5473
$P_{t,h}$	0.7813
$P'_{s,t}$	0.2744
$P'_{C',s}$	0.5767
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4857
$P'_{i,h}$	0.7743

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0175
$\Delta P_{C,s}$	0.0089
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	-0.0484

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.1
T_g [°C]	668
T_{10}^{13} [°C]	670
$T_{10}^{7.6}$ [°C]	750
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.890
AT [°C]	702
ρ [g/cm ³]	4.22
E [10^3 N/mm ²]	122
μ	0.295
K [10^{-6} mm ² /N]	1.43
HK _{0.1/20}	797
CR	1
FR	1
SR	51.3
AR	1
PR	2
SR-J	4
WR-J	1

N-LAK34
729545.402 $n_d = 1.72916$ $v_d = 54.50$ $n_F - n_C = 0.013379$ $n_e = 1.73235$ $v_e = 54.27$ $n_F' - n_C' = 0.013493$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.68925
$n_{1970.1}$	1970.1	1.69695
$n_{1529.6}$	1529.6	1.70500
$n_{1060.0}$	1060.0	1.71315
n_t	1014.0	1.71407
n_s	852.1	1.71787
n_f	706.5	1.72277
n_C	656.3	1.72509
$n_{C'}$	643.8	1.72574
$n_{632.8}$	632.8	1.72634
n_D	589.3	1.72904
n_d	587.6	1.72916
n_e	546.1	1.73235
n_F	486.1	1.73847
$n_{F'}$	480.0	1.73923
n_g	435.8	1.74575
n_h	404.7	1.75180
n_i	365.0	1.76214
$n_{334.1}$	334.1	1.77331
$n_{312.6}$	312.6	1.78359
$n_{296.7}$	296.7	1.79296
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.26661442
B_2	0.665919318
B_3	1.124961200
C_1	0.00589278062
C_2	0.0197509041
C_3	78.8894174

Constants of Formula for dn/dT	
D_0	1.96E-06
D_1	9.65E-09
D_2	4.40E-12
E_0	4.91E-07
E_1	5.28E-10
λ_{TK} [μm]	0.161

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.1	3.9	4.6	0.8	1.5	2.2
+20/+40	3.0	3.8	4.6	1.5	2.3	3.1
+60/+80	3.1	4.0	4.9	2.0	2.9	3.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.670	0.370
1970	0.940	0.850
1530	0.984	0.960
1060	0.998	0.995
700	0.999	0.997
660	0.999	0.997
620	0.998	0.996
580	0.998	0.995
546	0.999	0.997
500	0.998	0.994
460	0.995	0.987
436	0.992	0.979
420	0.989	0.972
405	0.983	0.959
400	0.981	0.952
390	0.976	0.940
380	0.963	0.910
370	0.940	0.860
365	0.920	0.820
350	0.850	0.670
334	0.710	0.430
320	0.530	0.200
310	0.380	0.070
300	0.280	0.030
290	0.170	0.010
280	0.070	
270	0.010	
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	37/28

(*= λ_{70}/λ_5)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2841
$P_{C,s}$	0.5398
$P_{d,C}$	0.3042
$P_{e,d}$	0.2384
$P_{g,F}$	0.5443
$P_{t,h}$	0.7726
$P'_{s,t}$	0.2817
$P'_{C',s}$	0.5833
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2364
$P'_{g,F'}$	0.4832
$P'_{i,h}$	0.7661

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0204
$\Delta P_{C,s}$	0.0099
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0079
$\Delta P_{i,g}$	-0.0423

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.9
T_g [°C]	668
T_{10}^{13} [°C]	668
$T_{10}^{7.6}$ [°C]	740
c_p [J/(g·K)]	0.520
λ [W/(m·K)]	0.820
ρ [g/cm ³]	4.02
E [10^3 N/mm ²]	117
μ	0.290
K [10^{-6} mm ² /N]	1.52
$HK_{0.1/20}$	740
HG	2
CR	1
FR	0
SR	52.3
AR	1
PR	2.3

P-LAK35
693532.385 $n_d = 1.69350$ $v_d = 53.20$ $n_F - n_C = 0.013036$ $n_e = 1.69661$ $v_e = 52.95$ $n_F' - n_C' = 0.013156$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.65762
$n_{1970.1}$	1970.1	1.66411
$n_{1529.6}$	1529.6	1.67100
$n_{1060.0}$	1060.0	1.67824
n_t	1014.0	1.67909
n_s	852.1	1.68264
n_f	706.5	1.68732
n_C	656.3	1.68955
$n_{C'}$	643.8	1.69018
$n_{632.8}$	632.8	1.69077
n_D	589.3	1.69338
n_d	587.6	1.69350
n_e	546.1	1.69661
n_F	486.1	1.70259
$n_{F'}$	480.0	1.70334
n_g	435.8	1.70974
n_h	404.7	1.71569
n_i	365.0	1.72590
$n_{334.1}$	334.1	1.73698
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.39324260
B_2	0.418882766
B_3	1.043807000
C_1	0.00715959695
C_2	0.0233637446
C_3	88.3284426

Constants of Formula for dn/dT	
D_0	-1.90E-06
D_1	7.99E-09
D_2	7.76E-12
E_0	5.64E-07
E_1	6.57E-10
λ_{TK} [μm]	0.185

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.1	1.9	2.7	-1.2	-0.4	0.3
+20/+40	0.8	1.7	2.6	-0.7	0.2	1.1
+60/+80	0.9	1.9	2.9	-0.3	0.7	1.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.550	0.220
2325	0.760	0.500
1970	0.950	0.870
1530	0.992	0.981
1060	0.999	0.999
700	0.997	0.993
660	0.997	0.992
620	0.997	0.992
580	0.997	0.993
546	0.998	0.994
500	0.997	0.992
460	0.994	0.985
436	0.992	0.980
420	0.991	0.977
405	0.989	0.973
400	0.988	0.970
390	0.984	0.960
380	0.976	0.940
370	0.962	0.910
365	0.950	0.880
350	0.890	0.740
334	0.750	0.480
320	0.540	0.210
310	0.350	0.060
300	0.160	0.010
290	0.030	0.000
280	0.000	
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/29

(*= $\lambda_{70}/\lambda_{50}$)

Remarks
suitable for precision molding

Relative Partial Dispersion	
$P_{s,t}$	0.2723
$P_{C,s}$	0.5304
$P_{d,C}$	0.3028
$P_{e,d}$	0.2383
$P_{g,F}$	0.5482
$P_{t,h}$	0.7832
$P'_{s,t}$	0.2698
$P'_{C',s}$	0.5732
$P'_{d,C'}$	0.2524
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4864
$P'_{i,h}$	0.7761

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0053
$\Delta P_{C,s}$	0.0034
$\Delta P_{F,e}$	-0.0015
$\Delta P_{g,F}$	-0.0061
$\Delta P_{i,g}$	-0.0379

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.7
T_g [°C]	508
T_{10}^{13} [°C]	511
$T_{10}^{7.6}$ [°C]	598
c_p [J/(g·K)]	0.630
λ [W/(m·K)]	0.720
AT [°C]	544
ρ [g/cm ³]	3.85
E [10^3 N/mm ²]	101
μ	0.289
K [10^{-6} mm ² /N]	1.76
HK _{0.1/20}	616
Abrasion Aa	119
CR	2
FR	5
SR	53.3
AR	1.3
PR	4.3
SR-J	4
WR-J	3

LLF1
548458.294 $n_d = 1.54814$ $v_d = 45.75$ $n_F - n_C = 0.011981$ $n_e = 1.55099$ $v_e = 45.47$ $n_F' - n_C' = 0.012118$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.51865
$n_{1970.1}$	1970.1	1.52354
$n_{1529.6}$	1529.6	1.52884
$n_{1060.0}$	1060.0	1.53470
n_t	1014.0	1.53541
n_s	852.1	1.53845
n_f	706.5	1.54256
n_C	656.3	1.54457
$n_{C'}$	643.8	1.54513
$n_{632.8}$	632.8	1.54566
n_D	589.3	1.54803
n_d	587.6	1.54814
n_e	546.1	1.55099
n_F	486.1	1.55655
$n_{F'}$	480.0	1.55725
n_g	435.8	1.56333
n_h	404.7	1.56911
n_i	365.0	1.57932
$n_{334.1}$	334.1	1.59092
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.21640125
B_2	0.133664540
B_3	0.883399468
C_1	0.00857807248
C_2	0.0420143003
C_3	107.5930600

Constants of Formula for dn/dT	
D_0	3.25E-07
D_1	1.74E-08
D_2	-6.12E-11
E_0	6.53E-07
E_1	2.58E-10
λ_{TK} [μm]	0.233

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.5	2.4	3.4	-0.6	0.3	1.3
+20/+40	1.9	2.9	3.9	0.6	1.5	2.5
+60/+80	2.0	3.0	4.1	1.0	2.0	3.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.500
2325	0.820	0.610
1970	0.930	0.840
1530	0.996	0.990
1060	0.998	0.996
700	0.999	0.997
660	0.998	0.996
620	0.998	0.996
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.998	0.996
436	0.998	0.996
420	0.998	0.995
405	0.998	0.994
400	0.997	0.993
390	0.997	0.992
380	0.995	0.988
370	0.994	0.984
365	0.992	0.981
350	0.982	0.955
334	0.920	0.810
320	0.620	0.300
310	0.240	0.010
300	0.020	
290	0.000	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2537
$P_{C,s}$	0.5108
$P_{d,C}$	0.2983
$P_{e,d}$	0.2376
$P_{g,F}$	0.5660
$P_{t,h}$	0.8520
$P'_{s,t}$	0.2508
$P'_{C',s}$	0.5516
$P'_{d,C'}$	0.2484
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5017
$P'_{i,h}$	0.8424

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0025
$\Delta P_{C,s}$	0.0012
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	-0.0062

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	431
T_{10}^{13} [°C]	426
$T_{10}^{7.6}$ [°C]	628
c_p [J/(g·K)]	0.650
λ [W/(m·K)]	0.990
ρ [g/cm ³]	2.94
E [10^3 N/mm ²]	60
μ	0.208
K [10^{-6} mm ² /N]	3.05
$HK_{0.1/20}$	450
HG	3
CR	1
FR	0
SR	1
AR	2
PR	1

LLF1HTi
548459.294 $n_d = 1.54815$ $v_d = 45.90$ $n_F - n_C = 0.011942$ $n_e = 1.55099$ $v_e = 45.62$ $n_{F'} - n_{C'} = 0.012078$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.51863
$n_{1970.1}$	1970.1	1.52354
$n_{1529.6}$	1529.6	1.52886
$n_{1060.0}$	1060.0	1.53473
n_t	1014.0	1.53544
n_s	852.1	1.53848
n_f	706.5	1.54259
n_C	656.3	1.54459
$n_{C'}$	643.8	1.54515
$n_{632.8}$	632.8	1.54568
n_D	589.3	1.54804
n_d	587.6	1.54815
n_e	546.1	1.55099
n_F	486.1	1.55653
$n_{F'}$	480.0	1.55723
n_g	435.8	1.56328
n_h	404.7	1.56904
n_i	365.0	1.57920
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.22510445
B_2	0.125155671
B_3	0.892236751
C_1	0.00870432098
C_2	0.0427325235
C_3	108.0499680

Constants of Formula for dn/dT	
D_0	2.55E-07
D_1	1.41E-08
D_2	-3.32E-11
E_0	6.74E-07
E_1	6.27E-10
λ_{TK} [μm]	0.227

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.7	2.6	3.5	-0.4	0.5	1.4
+20/+40	1.8	2.9	3.9	0.5	1.5	2.5
+60/+80	2.0	3.1	4.2	0.9	2.0	3.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.740	0.480
2325	0.800	0.580
1970	0.930	0.830
1530	0.996	0.990
1060	0.999	0.999
700	0.999	0.999
660	0.999	0.998
620	0.999	0.998
580	0.999	0.998
546	0.999	0.998
500	0.999	0.998
460	0.999	0.998
436	0.999	0.997
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.998	0.996
380	0.998	0.995
370	0.998	0.994
365	0.997	0.993
350	0.993	0.982
334	0.955	0.890
320	0.720	0.440
310	0.230	0.030
300	0.000	0.000
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
i-line glass	

Relative Partial Dispersion	
$P_{s,t}$	0.2544
$P_{C,s}$	0.5114
$P_{d,C}$	0.2985
$P_{e,d}$	0.2376
$P_{g,F}$	0.5656
$P_{t,h}$	0.8512
$P'_{s,t}$	0.2515
$P'_{C',s}$	0.5523
$P'_{d,C'}$	0.2485
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5014
$P'_{i,h}$	0.8416

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	0.0015
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0062

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	431
T_{10}^{13} [°C]	426
$T_{10}^{7.6}$ [°C]	628
c_p [J/(g·K)]	0.650
λ [W/(m·K)]	0.990
ρ [g/cm ³]	2.94
E [10^3 N/mm ²]	60
μ	0.208
K [10^{-6} mm ² /N]	3.05
$HK_{0.1/20}$	450
CR	1
FR	0
SR	1
AR	2
PR	1

LF5
581409.322

 $n_d = 1.58144$ $v_d = 40.85$ $n_F - n_C = 0.014233$ $n_e = 1.58482$ $v_e = 40.57$ $n_F' - n_C' = 0.014413$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54966
$n_{1970.1}$	1970.1	1.55445
$n_{1529.6}$	1529.6	1.55975
$n_{1060.0}$	1060.0	1.56594
n_t	1014.0	1.56672
n_s	852.1	1.57014
n_f	706.5	1.57489
n_C	656.3	1.57723
$n_{C'}$	643.8	1.57789
$n_{632.8}$	632.8	1.57851
n_D	589.3	1.58132
n_d	587.6	1.58144
n_e	546.1	1.58482
n_F	486.1	1.59146
$n_{F'}$	480.0	1.59231
n_g	435.8	1.59964
n_h	404.7	1.60668
n_i	365.0	1.61926
$n_{334.1}$	334.1	1.63380
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28035628
B_2	0.163505973
B_3	0.893930112
C_1	0.00929854416
C_2	0.0449135769
C_3	110.4936850

Constants of Formula for dn/dT	
D_0	-2.27E-06
D_1	9.71E-09
D_2	-2.83E-11
E_0	8.36E-07
E_1	9.95E-10
λ_{TK} [μm]	0.228

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.8	1.9	3.1	-1.3	-0.2	0.9
+20/+40	0.8	2.0	3.4	-0.6	0.7	2.0
+60/+80	0.8	2.2	3.7	-0.3	1.1	2.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500		
2325	0.850	0.660
1970	0.950	0.870
1530	0.997	0.992
1060	0.999	0.998
700	0.999	0.998
660	0.999	0.998
620	0.999	0.998
580	0.999	0.997
546	0.999	0.997
500	0.998	0.996
460	0.998	0.995
436	0.998	0.994
420	0.997	0.993
405	0.997	0.992
400	0.997	0.992
390	0.994	0.984
380	0.989	0.973
370	0.984	0.961
365	0.981	0.954
350	0.950	0.880
334	0.800	0.570
320	0.320	0.040
310	0.040	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2401
$P_{C,s}$	0.4981
$P_{d,C}$	0.2959
$P_{e,d}$	0.2373
$P_{g,F}$	0.5748
$P_{t,h}$	0.8836
$P'_{s,t}$	0.2371
$P'_{C',s}$	0.5378
$P'_{d,C'}$	0.2462
$P'_{e,d}$	0.2343
$P'_{g,F'}$	0.5091
$P'_{i,h}$	0.8726

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0006
$\Delta P_{C,s}$	0.0000
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0003
$\Delta P_{i,g}$	-0.0037

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.6
T_g [°C]	419
T_{10}^{13} [°C]	411
$T_{10}^{7.6}$ [°C]	585
c_p [J/(g·K)]	0.657
λ [W/(m·K)]	0.866
ρ [g/cm ³]	3.22
E [10^3 N/mm ²]	59
μ	0.223
K [10^{-6} mm ² /N]	2.83
$HK_{0.1/20}$	450
HG	2
CR	2
FR	0
SR	1
AR	2.3
PR	2

LF5HTi
581409.322 $n_d = 1.58144$ $v_d = 40.89$ $n_F - n_C = 0.014220$ $n_e = 1.58482$ $v_e = 40.61$ $n_{F'} - n_{C'} = 0.014400$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.54970
$n_{1970.1}$	1970.1	1.55448
$n_{1529.6}$	1529.6	1.55978
$n_{1060.0}$	1060.0	1.56596
n_t	1014.0	1.56674
n_s	852.1	1.57015
n_f	706.5	1.57490
n_C	656.3	1.57724
$n_{C'}$	643.8	1.57790
$n_{632.8}$	632.8	1.57852
n_D	589.3	1.58132
n_d	587.6	1.58144
n_e	546.1	1.58482
n_F	486.1	1.59145
$n_{F'}$	480.0	1.59230
n_g	435.8	1.59963
n_h	404.7	1.60665
n_i	365.0	1.61921
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.28552924
B_2	0.158357622
B_3	0.892175122
C_1	0.00939886260
C_2	0.0452566659
C_3	110.5448290

Constants of Formula for dn/dT	
D_0	-2.26E-06
D_1	1.17E-08
D_2	-4.14E-11
E_0	8.24E-07
E_1	7.78E-10
λ_{TK} [μm]	0.232

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.7	1.8	3.0	-1.4	-0.3	0.8
+20/+40	0.8	2.0	3.4	-0.6	0.7	2.0
+60/+80	0.8	2.2	3.6	-0.3	1.1	2.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.530
2325	0.830	0.630
1970	0.940	0.850
1530	0.996	0.991
1060	0.999	0.999
700	0.999	0.999
660	0.999	0.999
620	0.999	0.999
580	0.999	0.999
546	0.999	0.999
500	0.999	0.998
460	0.999	0.998
436	0.999	0.998
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.999	0.996
380	0.998	0.995
370	0.997	0.993
365	0.996	0.991
350	0.985	0.962
334	0.890	0.750
320	0.380	0.090
310	0.020	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	33/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
i-line glass	

Relative Partial Dispersion	
$P_{s,t}$	0.2401
$P_{C,s}$	0.4982
$P_{d,C}$	0.2959
$P_{e,d}$	0.2373
$P_{g,F}$	0.5746
$P_{t,h}$	0.8831
$P'_{s,t}$	0.2371
$P'_{C',s}$	0.5380
$P'_{d,C'}$	0.2462
$P'_{e,d}$	0.2343
$P'_{g,F'}$	0.5090
$P'_{i,h}$	0.8721

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0006
$\Delta P_{C,s}$	0.0000
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0004
$\Delta P_{i,g}$	-0.0041

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.6
T_g [°C]	419
T_{10}^{13} [°C]	411
$T_{10}^{7.6}$ [°C]	585
c_p [J/(g·K)]	0.657
λ [W/(m·K)]	0.866
ρ [g/cm ³]	3.22
E [10^3 N/mm ²]	59
μ	0.223
K [10^{-6} mm ² /N]	2.83
$HK_{0.1/20}$	450
CR	2
FR	0
SR	1
AR	2.3
PR	2

F2
620364.360

 $n_d = 1.62004$ $v_d = 36.37$ $n_F - n_C = 0.017050$ $n_e = 1.62408$ $v_e = 36.11$ $n_F' - n_C' = 0.017284$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58465
$n_{1970.1}$	1970.1	1.58958
$n_{1529.6}$	1529.6	1.59513
$n_{1060.0}$	1060.0	1.60190
n_t	1014.0	1.60279
n_s	852.1	1.60671
n_f	706.5	1.61227
n_C	656.3	1.61503
$n_{C'}$	643.8	1.61582
$n_{632.8}$	632.8	1.61656
n_D	589.3	1.61989
n_d	587.6	1.62004
n_e	546.1	1.62408
n_F	486.1	1.63208
$n_{F'}$	480.0	1.63310
n_g	435.8	1.64202
n_h	404.7	1.65064
n_i	365.0	1.66623
$n_{334.1}$	334.1	1.68455
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.34533359
B_2	0.209073176
B_3	0.937357162
C_1	0.00997743871
C_2	0.0470450767
C_3	111.8867640

Constants of Formula for dn/dT	
D_0	1.51E-06
D_1	1.56E-08
D_2	-2.78E-11
E_0	9.34E-07
E_1	1.04E-09
λ_{TK} [μm]	0.250

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	3.9	5.5	0.3	1.6	3.2
+20/+40	2.7	4.4	6.3	1.3	3.0	4.8
+60/+80	3.0	4.8	6.8	1.9	3.7	5.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.590
2325	0.860	0.690
1970	0.950	0.880
1530	0.996	0.989
1060	0.999	0.998
700	0.999	0.998
660	0.999	0.997
620	0.999	0.998
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.994
436	0.997	0.993
420	0.996	0.991
405	0.995	0.987
400	0.994	0.985
390	0.991	0.977
380	0.985	0.963
370	0.975	0.940
365	0.968	0.920
350	0.910	0.780
334	0.540	0.210
320	0.080	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	35/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2301
$P_{C,s}$	0.4882
$P_{d,C}$	0.2938
$P_{e,d}$	0.2370
$P_{g,F}$	0.5828
$P_{t,h}$	0.9142
$P'_{s,t}$	0.2270
$P'_{C',s}$	0.5270
$P'_{d,C'}$	0.2443
$P'_{e,d}$	0.2338
$P'_{g,F'}$	0.5159
$P'_{i,h}$	0.9018

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0008
$\Delta P_{C,s}$	0.0005
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	0.0006

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	434
T_{10}^{13} [°C]	430
$T_{10}^{7.6}$ [°C]	594
c_p [J/(g·K)]	0.557
λ [W/(m·K)]	0.780
ρ [g/cm ³]	3.60
E [10^3 N/mm ²]	57
μ	0.220
K [10^{-6} mm ² /N]	2.81
$HK_{0.1/20}$	420
HG	2
CR	1
FR	0
SR	1
AR	2.3
PR	1.3

F2HT
620364.360 $n_d = 1.62004$ $v_d = 36.37$ $n_F - n_C = 0.017050$ $n_e = 1.62408$ $v_e = 36.11$ $n_F' - n_C' = 0.017284$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58465
$n_{1970.1}$	1970.1	1.58958
$n_{1529.6}$	1529.6	1.59513
$n_{1060.0}$	1060.0	1.60190
n_t	1014.0	1.60279
n_s	852.1	1.60671
n_f	706.5	1.61227
n_C	656.3	1.61503
$n_{C'}$	643.8	1.61582
$n_{632.8}$	632.8	1.61656
n_D	589.3	1.61989
n_d	587.6	1.62004
n_e	546.1	1.62408
n_F	486.1	1.63208
$n_{F'}$	480.0	1.63310
n_g	435.8	1.64202
n_h	404.7	1.65064
n_i	365.0	1.66623
$n_{334.1}$	334.1	1.68455
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.34533359
B_2	0.209073176
B_3	0.937357162
C_1	0.00997743871
C_2	0.0470450767
C_3	111.8867640

Constants of Formula for dn/dT	
D_0	1.51E-06
D_1	1.56E-08
D_2	-2.78E-11
E_0	9.34E-07
E_1	1.04E-09
λ_{TK} [μm]	0.250

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.4	3.9	5.5	0.3	1.6	3.2
+20/+40	2.7	4.4	6.3	1.3	3.0	4.8
+60/+80	3.0	4.8	6.8	1.9	3.7	5.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.870	0.710
2325	0.910	0.800
1970	0.968	0.920
1530	0.998	0.994
1060	0.999	0.998
700	0.999	0.998
660	0.999	0.997
620	0.999	0.998
580	0.999	0.998
546	0.999	0.998
500	0.999	0.997
460	0.998	0.995
436	0.998	0.994
420	0.997	0.994
405	0.997	0.992
400	0.996	0.991
390	0.995	0.988
380	0.993	0.982
370	0.988	0.971
365	0.983	0.957
350	0.930	0.830
334	0.570	0.240
320	0.080	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	35/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2301
$P_{C,s}$	0.4882
$P_{d,C}$	0.2938
$P_{e,d}$	0.2370
$P_{g,F}$	0.5828
$P_{t,h}$	0.9142
$P'_{s,t}$	0.2270
$P'_{C',s}$	0.5270
$P'_{d,C'}$	0.2443
$P'_{e,d}$	0.2338
$P'_{g,F'}$	0.5159
$P'_{i,h}$	0.9018

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0008
$\Delta P_{C,s}$	0.0005
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	0.0006

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	434
T_{10}^{13} [°C]	430
$T_{10}^{7.6}$ [°C]	594
c_p [J/(g·K)]	0.557
λ [W/(m·K)]	0.780
ρ [g/cm ³]	3.60
E [10^3 N/mm ²]	57
μ	0.220
K [10^{-6} mm ² /N]	2.81
$HK_{0.1/20}$	420
HG	2
CR	1
FR	0
SR	1
AR	2.3
PR	1.3

F5
603380.347

 $n_d = 1.60342$ $v_d = 38.03$ $n_F - n_C = 0.015867$ $n_e = 1.60718$ $v_e = 37.77$ $n_F' - n_C' = 0.016078$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.56934
$n_{1970.1}$	1970.1	1.57427
$n_{1529.6}$	1529.6	1.57979
$n_{1060.0}$	1060.0	1.58636
n_t	1014.0	1.58721
n_s	852.1	1.59093
n_f	706.5	1.59616
n_C	656.3	1.59875
$n_{C'}$	643.8	1.59948
$n_{632.8}$	632.8	1.60017
n_D	589.3	1.60328
n_d	587.6	1.60342
n_e	546.1	1.60718
n_F	486.1	1.61461
$n_{F'}$	480.0	1.61556
n_g	435.8	1.62381
n_h	404.7	1.63176
n_i	365.0	1.64606
$n_{334.1}$	334.1	1.66276
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.31044630
B_2	0.196034260
B_3	0.966129770
C_1	0.00958633048
C_2	0.0457627627
C_3	115.0118830

Constants of Formula for dn/dT	
D_0	2.13E-06
D_1	1.65E-08
D_2	-6.98E-11
E_0	1.02E-06
E_1	6.56E-10
λ_{TK} [μm]	0.208

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.5	4.0	5.5	0.4	1.8	3.3
+20/+40	3.0	4.6	6.2	1.6	3.2	4.8
+60/+80	3.1	4.8	6.5	2.0	3.7	5.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.790	0.550
2325	0.840	0.650
1970	0.940	0.860
1530	0.995	0.987
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.998	0.994
460	0.996	0.991
436	0.996	0.990
420	0.995	0.988
405	0.994	0.985
400	0.993	0.982
390	0.989	0.973
380	0.984	0.960
370	0.971	0.930
365	0.963	0.910
350	0.900	0.760
334	0.620	0.300
320	0.080	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	35/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2346
$P_{C,s}$	0.4925
$P_{d,C}$	0.2946
$P_{e,d}$	0.2371
$P_{g,F}$	0.5795
$P_{t,h}$	0.9015
$P'_{s,t}$	0.2315
$P'_{C',s}$	0.5317
$P'_{d,C'}$	0.2451
$P'_{e,d}$	0.2340
$P'_{g,F'}$	0.5131
$P'_{i,h}$	0.8897

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0017
$\Delta P_{C,s}$	0.0009
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0003
$\Delta P_{i,g}$	-0.0028

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.9
T_g [°C]	438
T_{10}^{13} [°C]	425
$T_{10}^{7.6}$ [°C]	608
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.880
ρ [g/cm ³]	3.47
E [10^3 N/mm ²]	58
μ	0.220
K [10^{-6} mm ² /N]	2.92
$HK_{0.1/20}$	450
HG	3
CR	1
FR	0
SR	1
AR	2.3
PR	2

N-F2
620364.265 $n_d = 1.62005$ $v_d = 36.43$ $n_F - n_C = 0.017020$ $n_e = 1.62408$ $v_e = 36.16$ $n_F' - n_C' = 0.017258$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.58136
$n_{1970.1}$	1970.1	1.58744
$n_{1529.6}$	1529.6	1.59410
$n_{1060.0}$	1060.0	1.60167
n_t	1014.0	1.60261
n_s	852.1	1.60667
n_f	706.5	1.61229
n_C	656.3	1.61506
$n_{C'}$	643.8	1.61584
$n_{632.8}$	632.8	1.61658
n_D	589.3	1.61990
n_d	587.6	1.62005
n_e	546.1	1.62408
n_F	486.1	1.63208
$n_{F'}$	480.0	1.63310
n_g	435.8	1.64209
n_h	404.7	1.65087
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.39757037
B_2	0.159201403
B_3	1.268654300
C_1	0.00995906143
C_2	0.0546931752
C_3	119.2483460

Constants of Formula for dn/dT	
D_0	4.62E-07
D_1	1.17E-08
D_2	-2.35E-11
E_0	7.47E-07
E_1	9.81E-10
λ_{TK} [μm]	0.263

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.0	3.2	4.6	-0.1	1.0	2.3
+20/+40	2.1	3.5	5.1	0.7	2.0	3.6
+60/+80	2.2	3.7	5.5	1.1	2.6	4.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.480
2325	0.840	0.640
1970	0.950	0.880
1530	0.991	0.977
1060	0.998	0.996
700	0.997	0.992
660	0.996	0.990
620	0.996	0.991
580	0.997	0.993
546	0.997	0.992
500	0.994	0.984
460	0.989	0.973
436	0.985	0.963
420	0.980	0.950
405	0.959	0.900
400	0.950	0.870
390	0.890	0.750
380	0.760	0.510
370	0.480	0.160
365	0.280	0.040
350	0.100	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2389
$P_{C,s}$	0.4925
$P_{d,C}$	0.2935
$P_{e,d}$	0.2366
$P_{g,F}$	0.5881
$P_{t,h}$	
$P'_{s,t}$	0.2356
$P'_{C',s}$	0.5312
$P'_{d,C'}$	0.2440
$P'_{e,d}$	0.2334
$P'_{g,F'}$	0.5208
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0137
$\Delta P_{C,s}$	0.0047
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0056
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.1
T_g [°C]	569
T_{10}^{13} [°C]	567
$T_{10}^{7.6}$ [°C]	686
c_p [J/(g·K)]	0.810
λ [W/(m·K)]	1.050
ρ [g/cm ³]	2.65
E [10^3 N/mm ²]	82
μ	0.228
K [10^{-6} mm ² /N]	3.03
$HK_{0.1/20}$	600
HG	2
CR	1
FR	0
SR	1
AR	1
PR	1

N-BASF2
664360.315 $n_d = 1.66446$ $v_d = 36.00$ $n_F - n_C = 0.018457$ $n_e = 1.66883$ $v_e = 35.73$ $n_F' - n_C' = 0.018720$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.62552
$n_{1970.1}$	1970.1	1.63109
$n_{1529.6}$	1529.6	1.63734
$n_{1060.0}$	1060.0	1.64484
n_t	1014.0	1.64581
n_s	852.1	1.65007
n_f	706.5	1.65607
n_C	656.3	1.65905
$n_{C'}$	643.8	1.65990
$n_{632.8}$	632.8	1.66070
n_D	589.3	1.66430
n_d	587.6	1.66446
n_e	546.1	1.66883
n_F	486.1	1.67751
$n_{F'}$	480.0	1.67862
n_g	435.8	1.68838
n_h	404.7	1.69792
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.53652081
B_2	0.156971102
B_3	1.301968150
C_1	0.01084357290
C_2	0.0562278762
C_3	131.3397000

Constants of Formula for dn/dT	
D_0	1.89E-06
D_1	1.22E-08
D_2	-1.61E-11
E_0	7.77E-07
E_1	9.96E-10
λ_{TK} [μm]	0.256

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.8	4.1	5.6	0.6	1.9	3.3
+20/+40	2.9	4.4	6.2	1.5	3.0	4.7
+60/+80	3.1	4.8	6.7	2.0	3.6	5.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.860	0.680
2325	0.900	0.760
1970	0.971	0.930
1530	0.994	0.985
1060	0.999	0.997
700	0.996	0.990
660	0.994	0.985
620	0.994	0.985
580	0.995	0.987
546	0.994	0.985
500	0.988	0.971
460	0.980	0.951
436	0.971	0.930
420	0.954	0.890
405	0.910	0.800
400	0.890	0.750
390	0.800	0.580
380	0.630	0.320
370	0.320	0.060
365	0.160	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2309
$P_{C,s}$	0.4869
$P_{d,C}$	0.2929
$P_{e,d}$	0.2367
$P_{g,F}$	0.5890
$P_{t,h}$	
$P'_{s,t}$	0.2277
$P'_{C',s}$	0.5253
$P'_{d,C'}$	0.2435
$P'_{e,d}$	0.2333
$P'_{g,F'}$	0.5214
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0021
$\Delta P_{C,s}$	0.0001
$\Delta P_{F,e}$	0.0010
$\Delta P_{g,F}$	0.0057
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.1
T_g [°C]	619
T_{10}^{13} [°C]	622
$T_{10}^{7.6}$ [°C]	766
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	0.940
ρ [g/cm ³]	3.15
E [10^3 N/mm ²]	84
μ	0.247
K [10^{-6} mm ² /N]	3.04
$HK_{0.1/20}$	580
HG	3
CR	1
FR	0
SR	1
AR	1
PR	1

N-BASF64
704394.320 $n_d = 1.70400$ $v_d = 39.38$ $n_F - n_C = 0.017875$ $n_e = 1.70824$ $v_e = 39.12$ $n_F' - n_C' = 0.018105$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.66373
$n_{1970.1}$	1970.1	1.66988
$n_{1529.6}$	1529.6	1.67667
$n_{1060.0}$	1060.0	1.68453
n_t	1014.0	1.68551
n_s	852.1	1.68982
n_f	706.5	1.69578
n_C	656.3	1.69872
$n_{C'}$	643.8	1.69955
$n_{632.8}$	632.8	1.70033
n_D	589.3	1.70384
n_d	587.6	1.70400
n_e	546.1	1.70824
n_F	486.1	1.71659
$n_{F'}$	480.0	1.71765
n_g	435.8	1.72690
n_h	404.7	1.73581
n_i	365.0	1.75184
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.65554268
B_2	0.171319770
B_3	1.336644480
C_1	0.01044856440
C_2	0.0499394756
C_3	118.9614720

Constants of Formula for dn/dT	
D_0	1.60E-06
D_1	1.02E-08
D_2	-2.68E-11
E_0	7.87E-07
E_1	9.65E-10
λ_{TK} [μm]	0.229

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.8	4.1	5.5	0.6	1.8	3.1
+20/+40	2.8	4.3	5.9	1.4	2.8	4.4
+60/+80	2.9	4.5	6.3	1.8	3.4	5.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.450
2325	0.850	0.670
1970	0.959	0.900
1530	0.988	0.970
1060	0.994	0.985
700	0.988	0.970
660	0.982	0.955
620	0.979	0.950
580	0.979	0.950
546	0.980	0.950
500	0.976	0.940
460	0.967	0.920
436	0.959	0.900
420	0.950	0.880
405	0.930	0.840
400	0.920	0.820
390	0.890	0.750
380	0.820	0.610
370	0.670	0.370
365	0.550	0.220
350	0.090	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/35
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2408
$P_{C,s}$	0.4979
$P_{d,C}$	0.2956
$P_{e,d}$	0.2372
$P_{g,F}$	0.5769
$P_{t,h}$	0.8970
$P'_{s,t}$	0.2377
$P'_{C',s}$	0.5375
$P'_{d,C'}$	0.2459
$P'_{e,d}$	0.2342
$P'_{g,F'}$	0.5110
$P'_{i,h}$	0.8856

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0069
$\Delta P_{C,s}$	0.0032
$\Delta P_{F,e}$	-0.0004
$\Delta P_{g,F}$	-0.0006
$\Delta P_{i,g}$	0.0012

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.7
T_g [°C]	582
T_{10}^{13} [°C]	585
$T_{10}^{7.6}$ [°C]	712
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm ³]	3.20
E [10^3 N/mm ²]	105
μ	0.264
K [10^{-6} mm ² /N]	2.38
$HK_{0.1/20}$	650
HG	4
CR	1
FR	0
SR	3.2
AR	1.2
PR	1

LAFN7
750350.438 $n_d = 1.74950$ $v_d = 34.95$ $n_F - n_C = 0.021445$ $n_e = 1.75458$ $v_e = 34.72$ $n_F' - n_C' = 0.021735$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70211
$n_{1970.1}$	1970.1	1.70934
$n_{1529.6}$	1529.6	1.71726
$n_{1060.0}$	1060.0	1.72642
n_t	1014.0	1.72758
n_s	852.1	1.73264
n_f	706.5	1.73970
n_C	656.3	1.74319
$n_{C'}$	643.8	1.74418
$n_{632.8}$	632.8	1.74511
n_D	589.3	1.74931
n_d	587.6	1.74950
n_e	546.1	1.75458
n_F	486.1	1.76464
$n_{F'}$	480.0	1.76592
n_g	435.8	1.77713
n_h	404.7	1.78798
n_i	365.0	1.80762
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.66842615
B_2	0.298512803
B_3	1.077437600
C_1	0.01031599990
C_2	0.0469216348
C_3	82.5078509

Constants of Formula for dn/dT	
D_0	7.27E-06
D_1	1.31E-08
D_2	-3.32E-11
E_0	8.88E-07
E_1	9.32E-10
λ_{TK} [μm]	0.248

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.0	7.8	9.7	3.7	5.4	7.2
+20/+40	6.3	8.3	10.4	4.8	6.7	8.9
+60/+80	6.5	8.6	10.9	5.3	7.4	9.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.380	0.090
2325	0.700	0.410
1970	0.940	0.850
1530	0.984	0.960
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.994
500	0.998	0.994
460	0.993	0.982
436	0.986	0.965
420	0.976	0.940
405	0.950	0.880
400	0.940	0.850
390	0.910	0.780
380	0.840	0.650
370	0.690	0.400
365	0.550	0.220
350	0.130	0.010
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/35
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2360
$P_{C,s}$	0.4921
$P_{d,C}$	0.2941
$P_{e,d}$	0.2369
$P_{g,F}$	0.5825
$P_{t,h}$	0.9160
$P'_{s,t}$	0.2329
$P'_{C',s}$	0.5311
$P'_{d,C'}$	0.2446
$P'_{e,d}$	0.2338
$P'_{g,F'}$	0.5158
$P'_{i,h}$	0.9037

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0174
$\Delta P_{C,s}$	0.0078
$\Delta P_{F,e}$	-0.0011
$\Delta P_{g,F}$	-0.0025
$\Delta P_{i,g}$	-0.0093

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.4
T_g [°C]	500
T_{10}^{13} [°C]	481
$T_{10}^{7.6}$ [°C]	573
c_p [J/(g·K)]	
λ [W/(m·K)]	0.770
ρ [g/cm ³]	4.38
E [10^3 N/mm ²]	80
μ	0.280
K [10^{-6} mm ² /N]	1.77
$HK_{0.1/20}$	520
HG	3
CR	3
FR	1
SR	53.3
AR	2.2
PR	4.3

N-LAF2
744449.430

 $n_d = 1.74397$ $v_d = 44.85$ $n_F - n_C = 0.016588$ $n_e = 1.74791$ $v_e = 44.57$ $n_{F'} - n_{C'} = 0.016780$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70582
$n_{1970.1}$	1970.1	1.71169
$n_{1529.6}$	1529.6	1.71816
$n_{1060.0}$	1060.0	1.72563
n_t	1014.0	1.72656
n_s	852.1	1.73064
n_f	706.5	1.73627
n_C	656.3	1.73903
$n_{C'}$	643.8	1.73981
$n_{632.8}$	632.8	1.74054
n_D	589.3	1.74383
n_d	587.6	1.74397
n_e	546.1	1.74791
n_F	486.1	1.75562
$n_{F'}$	480.0	1.75659
n_g	435.8	1.76500
n_h	404.7	1.77298
n_i	365.0	1.78703
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.80984227
B_2	0.157295550
B_3	1.093003700
C_1	0.01017116220
C_2	0.0442431765
C_3	100.6877480

Constants of Formula for dn/dT	
D_0	-3.64E-06
D_1	9.20E-09
D_2	-6.00E-12
E_0	6.43E-07
E_1	6.11E-10
λ_{TK} [μm]	0.220

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.0	1.0	2.1	-2.3	-1.3	-0.3
+20/+40	-0.1	1.0	2.3	-1.6	-0.5	0.7
+60/+80	-0.1	1.2	2.5	-1.2	0.0	1.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.690	0.400
2325	0.860	0.690
1970	0.951	0.880
1530	0.994	0.985
1060	0.999	0.997
700	0.998	0.996
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.998	0.994
500	0.993	0.983
460	0.985	0.962
436	0.976	0.940
420	0.965	0.920
405	0.940	0.870
400	0.930	0.840
390	0.900	0.760
380	0.830	0.630
370	0.710	0.430
365	0.630	0.310
350	0.230	0.030
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2459
$P_{C,s}$	0.5057
$P_{d,C}$	0.2979
$P_{e,d}$	0.2377
$P_{g,F}$	0.5656
$P_{t,h}$	0.8470
$P'_{s,t}$	0.2431
$P'_{C',s}$	0.5464
$P'_{d,C'}$	0.2481
$P'_{e,d}$	0.2350
$P'_{g,F'}$	0.5012
$P'_{i,h}$	0.8373

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0061
$\Delta P_{C,s}$	-0.0017
$\Delta P_{F,e}$	-0.0004
$\Delta P_{g,F}$	-0.0027
$\Delta P_{i,g}$	-0.0202

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.1
T_g [°C]	653
T_{10}^{13} [°C]	645
$T_{10}^{7.6}$ [°C]	734
c_p [J/(g·K)]	0.510
λ [W/(m·K)]	0.670
ρ [g/cm ³]	4.30
E [10^3 N/mm ²]	94
μ	0.288
K [10^{-6} mm ² /N]	1.42
$HK_{0.1/20}$	530
HG	6
CR	2
FR	3
SR	52.2
AR	1
PR	2.2

N-LAF7
749348.373

 $n_d = 1.74950$ $v_d = 34.82$ $n_F - n_C = 0.021525$ $n_e = 1.75459$ $v_e = 34.56$ $n_F' - n_C' = 0.021833$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70344
$n_{1970.1}$	1970.1	1.71021
$n_{1529.6}$	1529.6	1.71772
$n_{1060.0}$	1060.0	1.72659
n_t	1014.0	1.72773
n_s	852.1	1.73272
n_f	706.5	1.73972
n_C	656.3	1.74320
$n_{C'}$	643.8	1.74419
$n_{632.8}$	632.8	1.74511
n_D	589.3	1.74931
n_d	587.6	1.74950
n_e	546.1	1.75459
n_F	486.1	1.76472
$n_{F'}$	480.0	1.76602
n_g	435.8	1.77741
n_h	404.7	1.78854
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.74028764
B_2	0.226710554
B_3	1.325255480
C_1	0.01079255800
C_2	0.0538626639
C_3	106.2686650

Constants of Formula for dn/dT	
D_0	9.21E-07
D_1	1.10E-08
D_2	-1.75E-11
E_0	7.67E-07
E_1	1.10E-09
λ_{TK} [μm]	0.264

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.5	3.9	5.6	0.2	1.5	3.1
+20/+40	2.6	4.3	6.3	1.1	2.7	4.7
+60/+80	2.7	4.6	6.8	1.6	3.4	5.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.680	0.380
2325	0.870	0.700
1970	0.960	0.900
1530	0.993	0.982
1060	0.998	0.996
700	0.997	0.992
660	0.995	0.988
620	0.994	0.985
580	0.992	0.980
546	0.988	0.970
500	0.971	0.930
460	0.940	0.850
436	0.900	0.770
420	0.860	0.680
405	0.780	0.540
400	0.750	0.490
390	0.660	0.350
380	0.520	0.190
370	0.300	0.050
365	0.170	0.010
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	46/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2317
$P_{C,s}$	0.4870
$P_{d,C}$	0.2928
$P_{e,d}$	0.2366
$P_{g,F}$	0.5894
$P_{t,h}$	
$P'_{s,t}$	0.2284
$P'_{C',s}$	0.5254
$P'_{d,C'}$	0.2434
$P'_{e,d}$	0.2333
$P'_{g,F'}$	0.5218
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0085
$\Delta P_{C,s}$	0.0029
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	0.0042
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	568
T_{10}^{13} [°C]	563
$T_{10}^{7.6}$ [°C]	669
c_p [J/(g·K)]	0.620
λ [W/(m·K)]	0.830
ρ [g/cm ³]	3.73
E [10^3 N/mm ²]	96
μ	0.271
K [10^{-6} mm ² /N]	2.57
$HK_{0.1/20}$	530
HG	5
CR	1
FR	2
SR	51.3
AR	1.2
PR	1.2

N-LAF21
788475.428 $n_d = 1.78800$ $v_d = 47.49$ $n_F - n_C = 0.016593$ $n_e = 1.79195$ $v_e = 47.25$ $n_F' - n_C' = 0.016761$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.74419
$n_{1970.1}$	1970.1	1.75191
$n_{1529.6}$	1529.6	1.76014
$n_{1060.0}$	1060.0	1.76892
n_t	1014.0	1.76995
n_s	852.1	1.77434
n_f	706.5	1.78019
n_C	656.3	1.78301
$n_{C'}$	643.8	1.78380
$n_{632.8}$	632.8	1.78454
n_D	589.3	1.78785
n_d	587.6	1.78800
n_e	546.1	1.79195
n_F	486.1	1.79960
$n_{F'}$	480.0	1.80056
n_g	435.8	1.80882
n_h	404.7	1.81657
n_i	365.0	1.83002
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87134529
B_2	0.250783010
B_3	1.220486390
C_1	0.00933322280
C_2	0.0345637762
C_3	83.2404866

Constants of Formula for dn/dT	
D_0	3.11E-06
D_1	1.13E-08
D_2	-2.07E-11
E_0	5.88E-07
E_1	6.32E-10
λ_{TK} [μm]	0.199

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.8	4.8	5.8	1.4	2.4	3.3
+20/+40	3.9	5.1	6.2	2.3	3.5	4.6
+60/+80	4.0	5.3	6.5	2.8	4.1	5.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.430	0.120
2325	0.710	0.430
1970	0.940	0.860
1530	0.988	0.971
1060	0.998	0.996
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.997	0.992
546	0.997	0.993
500	0.996	0.989
460	0.990	0.976
436	0.985	0.964
420	0.981	0.952
405	0.971	0.930
400	0.966	0.920
390	0.950	0.880
380	0.920	0.810
370	0.870	0.710
365	0.830	0.630
350	0.640	0.330
334	0.280	0.040
320	0.030	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2646
$P_{C,s}$	0.5222
$P_{d,C}$	0.3009
$P_{e,d}$	0.2380
$P_{g,F}$	0.5555
$P_{t,h}$	0.8106
$P'_{s,t}$	0.2619
$P'_{C',s}$	0.5641
$P'_{d,C'}$	0.2507
$P'_{e,d}$	0.2356
$P'_{g,F'}$	0.4927
$P'_{i,h}$	0.8025

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0165
$\Delta P_{C,s}$	0.0086
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0084
$\Delta P_{i,g}$	-0.0481

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.1
T_g [°C]	653
T_{10}^{13} [°C]	659
$T_{10}^{7.6}$ [°C]	729
c_p [J/(g·K)]	0.550
λ [W/(m·K)]	0.830
ρ [g/cm ³]	4.28
E [10^3 N/mm ²]	124
μ	0.295
K [10^{-6} mm ² /N]	1.46
$HK_{0.1/20}$	730
HG	2
CR	1
FR	1
SR	51.3
AR	1
PR	1.3

N-LAF33
786441.436 $n_d = 1.78582$ $v_d = 44.05$ $n_F - n_C = 0.017839$ $n_e = 1.79007$ $v_e = 43.80$ $n_{F'} - n_{C'} = 0.018038$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.74262
$n_{1970.1}$	1970.1	1.74968
$n_{1529.6}$	1529.6	1.75732
$n_{1060.0}$	1060.0	1.76584
n_t	1014.0	1.76689
n_s	852.1	1.77138
n_f	706.5	1.77751
n_C	656.3	1.78049
$n_{C'}$	643.8	1.78134
$n_{632.8}$	632.8	1.78213
n_D	589.3	1.78567
n_d	587.6	1.78582
n_e	546.1	1.79007
n_F	486.1	1.79833
$n_{F'}$	480.0	1.79937
n_g	435.8	1.80837
n_h	404.7	1.81687
n_i	365.0	1.83175
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.79653417
B_2	0.311577903
B_3	1.159818630
C_1	0.00927313493
C_2	0.0358201181
C_3	87.3448712

Constants of Formula for dn/dT	
D_0	8.17E-06
D_1	1.24E-08
D_2	-1.65E-11
E_0	7.11E-07
E_1	8.59E-10
λ_{TK} [μm]	0.210

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.8	8.1	9.4	4.4	5.7	7.0
+20/+40	7.0	8.5	10.0	5.5	6.9	8.4
+60/+80	7.2	8.9	10.5	6.0	7.6	9.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.470	0.150
2325	0.740	0.480
1970	0.950	0.870
1530	0.990	0.974
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.994
546	0.998	0.994
500	0.995	0.988
460	0.989	0.973
436	0.983	0.959
420	0.978	0.950
405	0.968	0.920
400	0.963	0.910
390	0.950	0.870
380	0.920	0.810
370	0.870	0.710
365	0.840	0.650
350	0.690	0.400
334	0.380	0.090
320	0.080	0.000
310	0.000	0.000
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2520
$P_{C,s}$	0.5107
$P_{d,C}$	0.2988
$P_{e,d}$	0.2378
$P_{g,F}$	0.5626
$P_{t,h}$	0.8339
$P'_{s,t}$	0.2492
$P'_{C',s}$	0.5518
$P'_{d,C'}$	0.2488
$P'_{e,d}$	0.2351
$P'_{g,F'}$	0.4987
$P'_{i,h}$	0.8247

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0088
$\Delta P_{C,s}$	0.0052
$\Delta P_{F,e}$	-0.0018
$\Delta P_{g,F}$	-0.0071
$\Delta P_{i,g}$	-0.0443

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.7
T_g [°C]	600
T_{10}^{13} [°C]	585
$T_{10}^{7.6}$ [°C]	673
c_p [J/(g·K)]	0.570
λ [W/(m·K)]	0.800
AT [°C]	628
ρ [g/cm ³]	4.36
E [10^3 N/mm ²]	111
μ	0.301
K [10^{-6} mm ² /N]	2.21
$HK_{0.1/20}$	730
HG	1
Abrasion Aa	67
CR	1
FR	2
SR	52.2
AR	1
PR	3
SR-J	6
WR-J	1

N-LAF34
773496.424 $n_d = 1.77250$ $v_d = 49.62$ $n_F - n_C = 0.015568$ $n_e = 1.77621$ $v_e = 49.38$ $n_F' - n_C' = 0.015719$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.73085
$n_{1970.1}$	1970.1	1.73824
$n_{1529.6}$	1529.6	1.74610
$n_{1060.0}$	1060.0	1.75447
n_t	1014.0	1.75546
n_s	852.1	1.75962
n_f	706.5	1.76515
n_C	656.3	1.76780
$n_{C'}$	643.8	1.76855
$n_{632.8}$	632.8	1.76924
n_D	589.3	1.77236
n_d	587.6	1.77250
n_e	546.1	1.77621
n_F	486.1	1.78337
$n_{F'}$	480.0	1.78427
n_g	435.8	1.79196
n_h	404.7	1.79915
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.75836958
B_2	0.313537785
B_3	1.189252310
C_1	0.00872810026
C_2	0.0293020832
C_3	85.1780644

Constants of Formula for dn/dT	
D_0	3.89E-06
D_1	1.02E-08
D_2	-1.91E-11
E_0	5.88E-07
E_1	7.57E-10
λ_{TK} [μm]	0.181

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.2	5.2	6.2	1.9	2.8	3.7
+20/+40	4.3	5.4	6.5	2.7	3.9	4.9
+60/+80	4.4	5.6	6.8	3.2	4.4	5.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.450	0.140
2325	0.730	0.450
1970	0.950	0.870
1530	0.989	0.973
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.996
620	0.998	0.995
580	0.998	0.995
546	0.998	0.996
500	0.997	0.993
460	0.994	0.986
436	0.991	0.978
420	0.988	0.971
405	0.983	0.958
400	0.980	0.950
390	0.971	0.930
380	0.955	0.890
370	0.930	0.830
365	0.910	0.790
350	0.820	0.600
334	0.640	0.330
320	0.420	0.120
310	0.240	0.030
300	0.070	0.000
290	0.000	
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	38/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2674
$P_{C,s}$	0.5256
$P_{d,C}$	0.3018
$P_{e,d}$	0.2382
$P_{g,F}$	0.5518
$P_{t,h}$	
$P'_{s,t}$	0.2648
$P'_{C',s}$	0.5679
$P'_{d,C'}$	0.2515
$P'_{e,d}$	0.2359
$P'_{g,F'}$	0.4895
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0126
$\Delta P_{C,s}$	0.0070
$\Delta P_{F,e}$	-0.0023
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.0
T_g [°C]	668
T_{10}^{13} [°C]	659
$T_{10}^{7.6}$ [°C]	745
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.800
ρ [g/cm ³]	4.24
E [10^3 N/mm ²]	123
μ	0.292
K [10^{-6} mm ² /N]	1.44
$HK_{0.1/20}$	770
HG	2
CR	1
FR	1
SR	51.3
AR	1
PR	1

N-LAF35
743494.412 $n_d = 1.74330$ $v_d = 49.40$ $n_F - n_C = 0.015047$ $n_e = 1.74688$ $v_e = 49.16$ $n_F' - n_C' = 0.015194$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	
$n_{1529.6}$	1529.6	
$n_{1060.0}$	1060.0	1.72588
n_t	1014.0	1.72683
n_s	852.1	1.73086
n_f	706.5	1.73620
n_C	656.3	1.73876
$n_{C'}$	643.8	1.73948
$n_{632.8}$	632.8	1.74015
n_D	589.3	1.74317
n_d	587.6	1.74330
n_e	546.1	1.74688
n_F	486.1	1.75381
$n_{F'}$	480.0	1.75467
n_g	435.8	1.76212
n_h	404.7	1.76908
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.51697436
B_2	0.455875464
B_3	1.074692420
C_1	0.00750943203
C_2	0.0260046715
C_3	80.5945159

Constants of Formula for dn/dT	
D_0	8.98E-06
D_1	1.26E-08
D_2	-1.23E-11
E_0	6.24E-07
E_1	6.86E-10
λ_{TK} [μm]	0.194

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	7.0	8.1	9.2	4.7	5.7	6.7
+20/+40	7.1	8.4	9.6	5.6	6.9	8.0
+60/+80	7.3	8.7	10.0	6.2	7.5	8.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.710	0.430
1970	0.940	0.850
1530	0.988	0.970
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.996
620	0.998	0.994
580	0.998	0.994
546	0.998	0.995
500	0.997	0.992
460	0.994	0.985
436	0.990	0.976
420	0.987	0.967
405	0.980	0.950
400	0.976	0.940
390	0.966	0.920
380	0.950	0.880
370	0.920	0.810
365	0.900	0.760
350	0.790	0.550
334	0.590	0.270
320	0.350	0.200
310	0.150	0.080
300	0.030	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	38/30

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2674
$P_{C,s}$	0.5253
$P_{d,C}$	0.3017
$P_{e,d}$	0.2381
$P_{g,F}$	0.5523
$P_{t,h}$	
$P'_{s,t}$	0.2648
$P'_{C',s}$	0.5676
$P'_{d,C'}$	0.2514
$P'_{e,d}$	0.2358
$P'_{g,F'}$	0.4899
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0134
$\Delta P_{C,s}$	0.0072
$\Delta P_{F,e}$	-0.0022
$\Delta P_{g,F}$	-0.0084
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.4
T_g [°C]	589
T_{10}^{13} [°C]	585
$T_{10}^{7.6}$ [°C]	669
c_p [J/(g·K)]	0.570
λ [W/(m·K)]	0.800
ρ [g/cm ³]	4.12
E [10^3 N/mm ²]	109
μ	0.301
K [10^{-6} mm ² /N]	2.29
$HK_{0.1/20}$	660
HG	2
CR	2
FR	1
SR	52.3
AR	1
PR	3.3

P-LAF37
755457.399 $n_d = 1.75550$ $v_d = 45.66$ $n_F - n_C = 0.016546$ $n_e = 1.75944$ $v_e = 45.42$ $n_{F'} - n_{C'} = 0.016722$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.71338
$n_{1970.1}$	1970.1	1.72058
$n_{1529.6}$	1529.6	1.72830
$n_{1060.0}$	1060.0	1.73669
n_t	1014.0	1.73770
n_s	852.1	1.74198
n_f	706.5	1.74775
n_C	656.3	1.75054
$n_{C'}$	643.8	1.75132
$n_{632.8}$	632.8	1.75206
n_D	589.3	1.75535
n_d	587.6	1.75550
n_e	546.1	1.75944
n_F	486.1	1.76708
$n_{F'}$	480.0	1.76804
n_g	435.8	1.77633
n_h	404.7	1.78414
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.76003244
B_2	0.248286745
B_3	1.159351220
C_1	0.00938006396
C_2	0.0360537464
C_3	86.4324693

Constants of Formula for dn/dT	
D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [μm]	

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20						
+20/+40						
+60/+80						

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.480	0.160
2325	0.750	0.490
1970	0.950	0.870
1530	0.990	0.976
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.994
546	0.998	0.994
500	0.996	0.991
460	0.993	0.983
436	0.990	0.975
420	0.987	0.967
405	0.982	0.955
400	0.980	0.950
390	0.971	0.930
380	0.959	0.900
370	0.940	0.850
365	0.920	0.810
350	0.840	0.640
334	0.650	0.340
320	0.280	0.040
310	0.040	0.000
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2591
$P_{C,s}$	0.5170
$P_{d,C}$	0.2999
$P_{e,d}$	0.2379
$P_{g,F}$	0.5590
$P_{t,h}$	
$P'_{s,t}$	0.2563
$P'_{C',s}$	0.5585
$P'_{d,C'}$	0.2498
$P'_{e,d}$	0.2354
$P'_{g,F'}$	0.4957
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0145
$\Delta P_{C,s}$	0.0077
$\Delta P_{F,e}$	-0.0022
$\Delta P_{g,F}$	-0.0080
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.8
T_g [°C]	506
T_{10}^{13} [°C]	510
$T_{10}^{7.6}$ [°C]	593
c_p [J/(g·K)]	0.640
λ [W/(m·K)]	0.900
AT [°C]	546
ρ [g/cm ³]	3.99
E [10^3 N/mm ²]	115
μ	0.296
K [10^{-6} mm ² /N]	2.26
HK _{0.1/20}	697
Abrasion Aa	67
CR	1
FR	3
SR	52.3
AR	1
PR	3
SR-J	4
WR-J	1

LASF35
022291.541

 $n_d = 2.02204$ $v_d = 29.06$ $n_F - n_C = 0.035170$ $n_e = 2.03035$ $v_e = 28.84$ $n_F' - n_C' = 0.035721$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.95946
$n_{1970.1}$	1970.1	1.96639
$n_{1529.6}$	1529.6	1.97472
$n_{1060.0}$	1060.0	1.98624
n_t	1014.0	1.98786
n_s	852.1	1.99531
n_f	706.5	2.00628
n_C	656.3	2.01185
$n_{C'}$	643.8	2.01343
$n_{632.8}$	632.8	2.01493
n_D	589.3	2.02173
n_d	587.6	2.02204
n_e	546.1	2.03035
n_F	486.1	2.04702
$n_{F'}$	480.0	2.04916
n_g	435.8	2.06805
n_h	404.7	2.08663
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.45505861
B_2	0.453006077
B_3	2.385130800
C_1	0.01356704040
C_2	0.0545803020
C_3	167.9047150

Constants of Formula for dn/dT	
D_0	1.43E-07
D_1	8.71E-09
D_2	-2.71E-11
E_0	1.02E-06
E_1	1.50E-09
λ_{TK} [μm]	0.263

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.6	5.0	7.8	-0.1	2.2	5.0
+20/+40	2.7	5.5	9.0	1.0	3.8	7.1
+60/+80	2.8	5.9	9.7	1.4	4.5	8.3

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.790	0.550
2325	0.880	0.720
1970	0.973	0.930
1530	0.995	0.987
1060	0.998	0.994
700	0.992	0.981
660	0.990	0.974
620	0.987	0.969
580	0.985	0.962
546	0.977	0.940
500	0.950	0.870
460	0.900	0.770
436	0.850	0.670
420	0.790	0.550
405	0.690	0.390
400	0.630	0.320
390	0.500	0.180
380	0.300	0.050
370	0.100	0.000
365	0.030	
350	0.000	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	45/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2118
$P_{C,s}$	0.4701
$P_{d,C}$	0.2899
$P_{e,d}$	0.2364
$P_{g,F}$	0.5982
$P_{t,h}$	
$P'_{s,t}$	0.2086
$P'_{C',s}$	0.5073
$P'_{d,C'}$	0.2409
$P'_{e,d}$	0.2327
$P'_{g,F'}$	0.5291
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0009
$\Delta P_{C,s}$	-0.0006
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0033
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.5
T_g [°C]	774
T_{10}^{13} [°C]	
$T_{10}^{7.6}$ [°C]	
c_p [J/(g·K)]	0.445
λ [W/(m·K)]	0.920
ρ [g/cm ³]	5.41
E [10^3 N/mm ²]	132
μ	0.303
K [10^{-6} mm ² /N]	0.73
$HK_{0.1/20}$	810
HG	1
CR	1
FR	0
SR	1.3
AR	1
PR	1.3

N-LASF9
850322.441 $n_d = 1.85025$ $v_d = 32.17$ $n_F - n_C = 0.026430$ $n_e = 1.85650$ $v_e = 31.93$ $n_F' - n_C' = 0.026827$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.80058
$n_{1970.1}$	1970.1	1.80659
$n_{1529.6}$	1529.6	1.81364
$n_{1060.0}$	1060.0	1.82293
n_t	1014.0	1.82420
n_s	852.1	1.82997
n_f	706.5	1.83834
n_C	656.3	1.84255
$n_{C'}$	643.8	1.84376
$n_{632.8}$	632.8	1.84489
n_D	589.3	1.85002
n_d	587.6	1.85025
n_e	546.1	1.85650
n_F	486.1	1.86898
$n_{F'}$	480.0	1.87058
n_g	435.8	1.88467
n_h	404.7	1.89845
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.00029547
B_2	0.298926886
B_3	1.806918430
C_1	0.01214260170
C_2	0.0538736236
C_3	156.5308290

Constants of Formula for dn/dT	
D_0	1.05E-06
D_1	1.02E-08
D_2	-2.38E-11
E_0	9.19E-07
E_1	1.18E-09
λ_{TK} [μm]	0.257

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.8	4.7	6.9	0.4	2.2	4.3
+20/+40	2.9	5.1	7.7	1.4	3.5	6.0
+60/+80	3.1	5.5	8.2	1.8	4.2	6.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.600
2325	0.870	0.710
1970	0.967	0.920
1530	0.994	0.986
1060	0.998	0.994
700	0.994	0.986
660	0.992	0.981
620	0.992	0.979
580	0.991	0.978
546	0.989	0.972
500	0.978	0.950
460	0.958	0.900
436	0.930	0.840
420	0.900	0.770
405	0.830	0.630
400	0.800	0.570
390	0.690	0.400
380	0.530	0.200
370	0.270	0.040
365	0.140	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/36*

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2181
$P_{C,s}$	0.4762
$P_{d,C}$	0.2912
$P_{e,d}$	0.2366
$P_{g,F}$	0.5934
$P_{t,h}$	
$P'_{s,t}$	0.2149
$P'_{C',s}$	0.5140
$P'_{d,C'}$	0.2420
$P'_{e,d}$	0.2330
$P'_{g,F'}$	0.5250
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0032
$\Delta P_{C,s}$	-0.0016
$\Delta P_{F,e}$	0.0008
$\Delta P_{g,F}$	0.0037
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	683
T_{10}^{13} [°C]	700
$T_{10}^{7.6}$ [°C]	817
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.790
ρ [g/cm ³]	4.41
E [10^3 N/mm ²]	109
μ	0.288
K [10^{-6} mm ² /N]	1.72
$HK_{0.1/20}$	515
HG	4
Abrasion Aa	120
CR	1
FR	0
SR	2
AR	1
PR	1

N-LASF9HT
850322.441 $n_d = 1.85025$ $v_d = 32.17$ $n_F - n_C = 0.026430$ $n_e = 1.85650$ $v_e = 31.93$ $n_F' - n_C' = 0.026827$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.80058
$n_{1970.1}$	1970.1	1.80659
$n_{1529.6}$	1529.6	1.81364
$n_{1060.0}$	1060.0	1.82293
n_t	1014.0	1.82420
n_s	852.1	1.82997
n_f	706.5	1.83834
n_C	656.3	1.84255
$n_{C'}$	643.8	1.84376
$n_{632.8}$	632.8	1.84489
n_D	589.3	1.85002
n_d	587.6	1.85025
n_e	546.1	1.85650
n_F	486.1	1.86898
$n_{F'}$	480.0	1.87058
n_g	435.8	1.88467
n_h	404.7	1.89845
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.00029547
B_2	0.298926886
B_3	1.806918430
C_1	0.01214260170
C_2	0.0538736236
C_3	156.5308290

Constants of Formula for dn/dT	
D_0	1.05E-06
D_1	1.02E-08
D_2	-2.38E-11
E_0	9.19E-07
E_1	1.18E-09
λ_{TK} [μm]	0.257

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.8	4.7	6.9	0.4	2.2	4.3
+20/+40	2.9	5.1	7.7	1.4	3.5	6.0
+60/+80	3.1	5.5	8.2	1.8	4.2	6.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.600
2325	0.870	0.710
1970	0.967	0.920
1530	0.994	0.986
1060	0.998	0.994
700	0.994	0.986
660	0.992	0.981
620	0.992	0.979
580	0.991	0.978
546	0.989	0.972
500	0.978	0.950
460	0.958	0.900
436	0.940	0.860
420	0.920	0.800
405	0.870	0.700
400	0.840	0.650
390	0.770	0.510
380	0.630	0.310
370	0.390	0.100
365	0.250	0.030
350	0.010	0.000
334	0.000	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	40/36*

(*= λ_{70}/λ_5)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2181
$P_{C,s}$	0.4762
$P_{d,C}$	0.2912
$P_{e,d}$	0.2366
$P_{g,F}$	0.5934
$P_{t,h}$	
$P'_{s,t}$	0.2149
$P'_{C',s}$	0.5140
$P'_{d,C'}$	0.2420
$P'_{e,d}$	0.2330
$P'_{g,F'}$	0.5250
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0032
$\Delta P_{C,s}$	-0.0016
$\Delta P_{F,e}$	0.0008
$\Delta P_{g,F}$	0.0037
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	683
T_{10}^{13} [°C]	700
$T_{10}^{7.6}$ [°C]	817
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.790
ρ [g/cm ³]	4.41
E [10^3 N/mm ²]	109
μ	0.288
K [10^{-6} mm ² /N]	1.72
$HK_{0.1/20}$	515
HG	4
CR	1
FR	0
SR	2
AR	1
PR	1

N-LASF31A
883408.551

$n_d = 1.88300$

$v_d = 40.76$

$n_F - n_C = 0.021663$

$n_e = 1.88815$

$v_e = 40.52$

$n_F' - n_C' = 0.021921$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.83590
$n_{1970.1}$	1970.1	1.84267
$n_{1529.6}$	1529.6	1.85026
$n_{1060.0}$	1060.0	1.85937
n_t	1014.0	1.86054
n_s	852.1	1.86572
n_f	706.5	1.87298
n_C	656.3	1.87656
$n_{C'}$	643.8	1.87757
$n_{632.8}$	632.8	1.87853
n_D	589.3	1.88281
n_d	587.6	1.88300
n_e	546.1	1.88815
n_F	486.1	1.89822
$n_{F'}$	480.0	1.89950
n_g	435.8	1.91050
n_h	404.7	1.92093
n_i	365.0	1.93920
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.96485075
B_2	0.475231259
B_3	1.483601090
C_1	0.00982060155
C_2	0.0344713438
C_3	110.7398630

Constants of Formula for dn/dT	
D_0	1.67E-06
D_1	8.90E-09
D_2	-8.73E-12
E_0	7.47E-07
E_1	7.46E-10
λ_{TK} [μm]	0.207

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.4	4.8	6.3	0.9	2.3	3.7
+20/+40	3.3	4.9	6.6	1.7	3.3	4.9
+60/+80	3.4	5.2	6.9	2.2	3.9	5.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.640	0.320
2325	0.820	0.620
1970	0.963	0.910
1530	0.993	0.983
1060	0.998	0.995
700	0.997	0.992
660	0.996	0.991
620	0.996	0.990
580	0.996	0.990
546	0.996	0.990
500	0.991	0.978
460	0.980	0.950
436	0.970	0.930
420	0.960	0.900
405	0.940	0.860
400	0.930	0.840
390	0.910	0.780
380	0.860	0.690
370	0.780	0.540
365	0.730	0.450
350	0.490	0.170
334	0.130	0.010
320	0.060	0.000
310	0.000	
300	0.000	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	38/33*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2391
$P_{C,s}$	0.5004
$P_{d,C}$	0.2972
$P_{e,d}$	0.2377
$P_{g,F}$	0.5667
$P_{t,h}$	0.8436
$P'_{s,t}$	0.2363
$P'_{C',s}$	0.5407
$P'_{d,C'}$	0.2475
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5021
$P'_{i,h}$	0.8337

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0012
$\Delta P_{C,s}$	0.0025
$\Delta P_{F,e}$	-0.0019
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	-0.0575

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.7
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.7
T_g [°C]	719
T_{10}^{13} [°C]	720
$T_{10}^{7.6}$ [°C]	830
c_p [J/(g·K)]	0.440
λ [W/(m·K)]	0.790
ρ [g/cm ³]	5.51
E [10^3 N/mm ²]	126
μ	0.301
K [10^{-6} mm ² /N]	1.18
$HK_{0.1/20}$	650
HG	2
CR	1
FR	0
SR	2.3
AR	1
PR	1

N-LASF40
834373.443

 $n_d = 1.83404$ $v_d = 37.30$ $n_F - n_C = 0.022363$ $n_e = 1.83935$ $v_e = 37.04$ $n_{F'} - n_{C'} = 0.022658$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78600
$n_{1970.1}$	1970.1	1.79298
$n_{1529.6}$	1529.6	1.80074
$n_{1060.0}$	1060.0	1.80999
n_t	1014.0	1.81118
n_s	852.1	1.81643
n_f	706.5	1.82380
n_C	656.3	1.82745
$n_{C'}$	643.8	1.82849
$n_{632.8}$	632.8	1.82946
n_D	589.3	1.83385
n_d	587.6	1.83404
n_e	546.1	1.83935
n_F	486.1	1.84981
$n_{F'}$	480.0	1.85114
n_g	435.8	1.86275
n_h	404.7	1.87393
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.98550331
B_2	0.274057042
B_3	1.289456610
C_1	0.01095833100
C_2	0.0474551603
C_3	96.9085286

Constants of Formula for dn/dT	
D_0	8.10E-06
D_1	1.25E-08
D_2	-1.73E-11
E_0	8.27E-07
E_1	1.08E-09
λ_{TK} [μm]	0.238

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	7.1	8.8	10.6	4.6	6.3	8.0
+20/+40	7.3	9.3	11.4	5.7	7.7	9.8
+60/+80	7.6	9.7	12.0	6.3	8.5	10.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.570	0.240
2325	0.810	0.590
1970	0.963	0.910
1530	0.993	0.982
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.997	0.992
546	0.995	0.988
500	0.987	0.969
460	0.973	0.930
436	0.954	0.890
420	0.940	0.850
405	0.910	0.780
400	0.890	0.750
390	0.840	0.650
380	0.760	0.510
370	0.600	0.280
365	0.470	0.150
350	0.040	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/35*
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2346
$P_{C,s}$	0.4929
$P_{d,C}$	0.2948
$P_{e,d}$	0.2371
$P_{g,F}$	0.5786
$P_{t,h}$	
$P'_{s,t}$	0.2315
$P'_{C',s}$	0.5321
$P'_{d,C'}$	0.2453
$P'_{e,d}$	0.2340
$P'_{g,F'}$	0.5124
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0055
$\Delta P_{C,s}$	0.0030
$\Delta P_{F,e}$	-0.0007
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.9
T_g [°C]	590
T_{10}^{13} [°C]	591
$T_{10}^{7.6}$ [°C]	677
c_p [J/(g·K)]	0.550
λ [W/(m·K)]	0.810
ρ [g/cm ³]	4.43
E [10^3 N/mm ²]	111
μ	0.304
K [10^{-6} mm ² /N]	2.19
$HK_{0.1/20}$	580
HG	1
CR	1
FR	1
SR	51.2
AR	1
PR	1.3

N-LASF41
835431.485

 $n_d = 1.83501$ $v_d = 43.13$ $n_F - n_C = 0.019361$ $n_e = 1.83961$ $v_e = 42.88$ $n_F' - n_C' = 0.019578$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78859
$n_{1970.1}$	1970.1	1.79608
$n_{1529.6}$	1529.6	1.80423
$n_{1060.0}$	1060.0	1.81338
n_t	1014.0	1.81450
n_s	852.1	1.81936
n_f	706.5	1.82599
n_C	656.3	1.82923
$n_{C'}$	643.8	1.83014
$n_{632.8}$	632.8	1.83100
n_D	589.3	1.83484
n_d	587.6	1.83501
n_e	546.1	1.83961
n_F	486.1	1.84859
$n_{F'}$	480.0	1.84972
n_g	435.8	1.85949
n_h	404.7	1.86872
n_i	365.0	1.88486
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.86348331
B_2	0.413307255
B_3	1.357848150
C_1	0.00910368219
C_2	0.0339247268
C_3	93.3580595

Constants of Formula for dn/dT	
D_0	3.03E-06
D_1	1.04E-08
D_2	-1.30E-11
E_0	6.62E-07
E_1	7.82E-10
λ_{TK} [μm]	0.209

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.0	5.2	6.4	1.5	2.7	3.9
+20/+40	4.0	5.4	6.8	2.4	3.8	5.2
+60/+80	4.2	5.7	7.2	2.9	4.5	6.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.480	0.160
2325	0.760	0.510
1970	0.950	0.880
1530	0.993	0.983
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.997	0.993
580	0.998	0.994
546	0.997	0.993
500	0.994	0.984
460	0.985	0.962
436	0.976	0.940
420	0.967	0.920
405	0.954	0.890
400	0.950	0.880
390	0.930	0.830
380	0.890	0.750
370	0.830	0.630
365	0.790	0.550
350	0.590	0.270
334	0.290	0.040
320	0.040	
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/32*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2508
$P_{C,s}$	0.5098
$P_{d,C}$	0.2986
$P_{e,d}$	0.2378
$P_{g,F}$	0.5629
$P_{t,h}$	0.8338
$P'_{s,t}$	0.2480
$P'_{C',s}$	0.5507
$P'_{d,C'}$	0.2487
$P'_{e,d}$	0.2351
$P'_{g,F'}$	0.4989
$P'_{i,h}$	0.8245

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0110
$\Delta P_{C,s}$	0.0063
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0083
$\Delta P_{i,g}$	-0.0520

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	651
T_{10}^{13} [°C]	658
$T_{10}^{7.6}$ [°C]	739
c_p [J/(g·K)]	0.490
λ [W/(m·K)]	0.790
ρ [g/cm ³]	4.85
E [10^3 N/mm ²]	124
μ	0.294
K [10^{-6} mm ² /N]	1.57
$HK_{0.1/20}$	760
HG	2
CR	1
FR	1
SR	4
AR	1
PR	1

N-LASF43
806406.426 $n_d = 1.80610$ $v_d = 40.61$ $n_F - n_C = 0.019850$ $n_e = 1.81081$ $v_e = 40.36$ $n_F' - n_C' = 0.020089$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.75901
$n_{1970.1}$	1970.1	1.76662
$n_{1529.6}$	1529.6	1.77488
$n_{1060.0}$	1060.0	1.78413
n_t	1014.0	1.78527
n_s	852.1	1.79018
n_f	706.5	1.79691
n_C	656.3	1.80020
$n_{C'}$	643.8	1.80113
$n_{632.8}$	632.8	1.80200
n_D	589.3	1.80593
n_d	587.6	1.80610
n_e	546.1	1.81081
n_F	486.1	1.82005
$n_{F'}$	480.0	1.82122
n_g	435.8	1.83137
n_h	404.7	1.84106
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.93502827
B_2	0.236629350
B_3	1.262913440
C_1	0.01040014130
C_2	0.0447505292
C_3	87.4375690

Constants of Formula for dn/dT	
D_0	4.77E-06
D_1	1.14E-08
D_2	-2.68E-12
E_0	6.62E-07
E_1	8.84E-10
λ_{TK} [μm]	0.234

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.9	6.2	7.6	2.5	3.8	5.0
+20/+40	5.0	6.5	8.1	3.4	4.9	6.4
+60/+80	5.2	6.9	8.6	4.0	5.6	7.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.710	0.430
1970	0.940	0.850
1530	0.984	0.960
1060	0.998	0.994
700	0.998	0.995
660	0.998	0.995
620	0.997	0.993
580	0.996	0.991
546	0.995	0.988
500	0.990	0.975
460	0.980	0.950
436	0.967	0.920
420	0.954	0.890
405	0.930	0.840
400	0.920	0.810
390	0.880	0.730
380	0.820	0.610
370	0.710	0.420
365	0.620	0.300
350	0.220	0.020
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	42/34
(*= λ_{70}/λ_5)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2476
$P_{C,s}$	0.5049
$P_{d,C}$	0.2972
$P_{e,d}$	0.2374
$P_{g,F}$	0.5703
$P_{t,h}$	
$P'_{s,t}$	0.2446
$P'_{C',s}$	0.5452
$P'_{d,C'}$	0.2473
$P'_{e,d}$	0.2346
$P'_{g,F'}$	0.5053
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0149
$\Delta P_{C,s}$	0.0073
$\Delta P_{F,e}$	-0.0016
$\Delta P_{g,F}$	-0.0052
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.7
T_g [°C]	614
T_{10}^{13} [°C]	615
$T_{10}^{7.6}$ [°C]	699
c_p [J/(g·K)]	0.550
λ [W/(m·K)]	0.810
ρ [g/cm ³]	4.26
E [10^3 N/mm ²]	114
μ	0.290
K [10^{-6} mm ² /N]	1.92
$HK_{0.1/20}$	720
HG	2
CR	1
FR	1
SR	51.3
AR	1
PR	2

N-LASF44
804465.444

 $n_d = 1.80420$ $v_d = 46.50$ $n_F - n_C = 0.017294$ $n_e = 1.80832$ $v_e = 46.25$ $n_F' - n_C' = 0.017476$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.76070
$n_{1970.1}$	1970.1	1.76801
$n_{1529.6}$	1529.6	1.77590
$n_{1060.0}$	1060.0	1.78455
n_t	1014.0	1.78560
n_s	852.1	1.79006
n_f	706.5	1.79609
n_C	656.3	1.79901
$n_{C'}$	643.8	1.79983
$n_{632.8}$	632.8	1.80060
n_D	589.3	1.80405
n_d	587.6	1.80420
n_e	546.1	1.80832
n_F	486.1	1.81630
$n_{F'}$	480.0	1.81731
n_g	435.8	1.82594
n_h	404.7	1.83405
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.78897105
B_2	0.386758670
B_3	1.305062430
C_1	0.00872506277
C_2	0.0308085023
C_3	92.7743824

Constants of Formula for dn/dT	
D_0	3.32E-06
D_1	1.12E-08
D_2	-8.52E-12
E_0	5.88E-07
E_1	7.13E-10
λ_{TK} [μm]	0.209

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.0	5.1	6.1	1.6	2.6	3.6
+20/+40	4.0	5.3	6.5	2.5	3.7	4.9
+60/+80	4.2	5.6	6.9	3.0	4.4	5.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.470	0.150
2325	0.740	0.470
1970	0.950	0.870
1530	0.990	0.975
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.996	0.989
460	0.991	0.977
436	0.986	0.965
420	0.980	0.950
405	0.967	0.920
400	0.963	0.910
390	0.950	0.870
380	0.910	0.790
370	0.860	0.690
365	0.820	0.620
350	0.660	0.350
334	0.380	0.090
320	0.150	
310	0.070	
300	0.030	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/31
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2582
$P_{C,s}$	0.5171
$P_{d,C}$	0.3002
$P_{e,d}$	0.2380
$P_{g,F}$	0.5572
$P_{t,h}$	
$P'_{s,t}$	0.2555
$P'_{C',s}$	0.5588
$P'_{d,C'}$	0.2501
$P'_{e,d}$	0.2355
$P'_{g,F'}$	0.4941
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0098
$\Delta P_{C,s}$	0.0058
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0084
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	655
T_{10}^{13} [°C]	659
$T_{10}^{7.6}$ [°C]	742
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.820
ρ [g/cm ³]	4.44
E [10^3 N/mm ²]	124
μ	0.293
K [10^{-6} mm ² /N]	1.41
$HK_{0.1/20}$	770
HG	2
CR	1
FR	1
SR	4
AR	1
PR	1

N-LASF45
801350.363 $n_d = 1.80107$ $v_d = 34.97$ $n_F - n_C = 0.022905$ $n_e = 1.80650$ $v_e = 34.72$ $n_F' - n_C' = 0.023227$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.75487
$n_{1970.1}$	1970.1	1.76104
$n_{1529.6}$	1529.6	1.76809
$n_{1060.0}$	1060.0	1.77689
n_t	1014.0	1.77805
n_s	852.1	1.78325
n_f	706.5	1.79066
n_C	656.3	1.79436
$n_{C'}$	643.8	1.79541
$n_{632.8}$	632.8	1.79640
n_D	589.3	1.80087
n_d	587.6	1.80107
n_e	546.1	1.80650
n_F	486.1	1.81726
$n_{F'}$	480.0	1.81864
n_g	435.8	1.83068
n_h	404.7	1.84237
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87140198
B_2	0.267777879
B_3	1.730300080
C_1	0.01121719200
C_2	0.0505134972
C_3	147.1065050

Constants of Formula for dn/dT	
D_0	2.78E-06
D_1	8.73E-09
D_2	-2.65E-11
E_0	8.24E-07
E_1	1.15E-09
λ_{TK} [μm]	0.255

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.8	5.4	7.3	1.4	3.0	4.7
+20/+40	3.8	5.7	7.9	2.3	4.1	6.2
+60/+80	3.8	5.9	8.3	2.6	4.7	7.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.880	0.720
1970	0.972	0.930
1530	0.995	0.988
1060	0.999	0.997
700	0.996	0.990
660	0.995	0.987
620	0.994	0.984
580	0.994	0.986
546	0.993	0.982
500	0.983	0.958
460	0.965	0.920
436	0.950	0.870
420	0.920	0.820
405	0.880	0.720
400	0.860	0.680
390	0.790	0.550
380	0.670	0.370
370	0.480	0.150
365	0.340	0.060
350	0.010	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	44/35
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2268
$P_{C,s}$	0.4849
$P_{d,C}$	0.2930
$P_{e,d}$	0.2368
$P_{g,F}$	0.5859
$P_{t,h}$	
$P'_{s,t}$	0.2237
$P'_{C',s}$	0.5235
$P'_{d,C'}$	0.2437
$P'_{e,d}$	0.2336
$P'_{g,F'}$	0.5186
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0009
$\Delta P_{C,s}$	0.0005
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0009
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.6
T_g [°C]	647
T_{10}^{13} [°C]	652
$T_{10}^{7.6}$ [°C]	773
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	1.020
ρ [g/cm ³]	3.63
E [10^3 N/mm ²]	116
μ	0.281
K [10^{-6} mm ² /N]	2.01
$HK_{0.1/20}$	630
HG	3
CR	1
FR	0
SR	3.2
AR	1
PR	1

N-LASF45HT
801350.363 $n_d = 1.80107$ $v_d = 34.97$ $n_F - n_C = 0.022905$ $n_e = 1.80650$ $v_e = 34.72$ $n_F' - n_C' = 0.023227$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.75487
$n_{1970.1}$	1970.1	1.76104
$n_{1529.6}$	1529.6	1.76809
$n_{1060.0}$	1060.0	1.77689
n_t	1014.0	1.77805
n_s	852.1	1.78325
n_f	706.5	1.79066
n_C	656.3	1.79436
$n_{C'}$	643.8	1.79541
$n_{632.8}$	632.8	1.79640
n_D	589.3	1.80087
n_d	587.6	1.80107
n_e	546.1	1.80650
n_F	486.1	1.81726
$n_{F'}$	480.0	1.81864
n_g	435.8	1.83068
n_h	404.7	1.84237
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87140198
B_2	0.267777879
B_3	1.730300080
C_1	0.01121719200
C_2	0.0505134972
C_3	147.1065050

Constants of Formula for dn/dT	
D_0	2.78E-06
D_1	8.73E-09
D_2	-2.65E-11
E_0	8.24E-07
E_1	1.15E-09
λ_{TK} [μm]	0.255

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.8	5.4	7.3	1.4	3.0	4.7
+20/+40	3.8	5.7	7.9	2.3	4.1	6.2
+60/+80	3.8	5.9	8.3	2.6	4.7	7.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.880	0.720
1970	0.972	0.930
1530	0.995	0.988
1060	0.999	0.997
700	0.996	0.990
660	0.995	0.987
620	0.994	0.986
580	0.994	0.986
546	0.993	0.983
500	0.985	0.964
460	0.972	0.930
436	0.958	0.900
420	0.940	0.860
405	0.910	0.780
400	0.890	0.740
390	0.830	0.620
380	0.720	0.440
370	0.530	0.200
365	0.400	0.100
350	0.030	0.000
334	0.000	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	43/35
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2268
$P_{C,s}$	0.4849
$P_{d,C}$	0.2930
$P_{e,d}$	0.2368
$P_{g,F}$	0.5859
$P_{t,h}$	
$P'_{s,t}$	0.2237
$P'_{C',s}$	0.5235
$P'_{d,C'}$	0.2437
$P'_{e,d}$	0.2336
$P'_{g,F'}$	0.5186
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0009
$\Delta P_{C,s}$	0.0005
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0009
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.6
T_g [°C]	647
T_{10}^{13} [°C]	652
$T_{10}^{7.6}$ [°C]	773
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	1.020
ρ [g/cm ³]	3.63
E [10^3 N/mm ²]	116
μ	0.281
K [10^{-6} mm ² /N]	2.01
$HK_{0.1/20}$	630
HG	3
CR	1
FR	0
SR	3.2
AR	1
PR	1

N-LASF46A
904313.445 $n_d = 1.90366$ $v_d = 31.32$ $n_F - n_C = 0.028853$ $n_e = 1.91048$ $v_e = 31.09$ $n_F' - n_C' = 0.029287$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.84576
$n_{1970.1}$	1970.1	1.85364
$n_{1529.6}$	1529.6	1.86255
$n_{1060.0}$	1060.0	1.87353
n_t	1014.0	1.87498
n_s	852.1	1.88143
n_f	706.5	1.89064
n_C	656.3	1.89526
$n_{C'}$	643.8	1.89657
$n_{632.8}$	632.8	1.89781
n_D	589.3	1.90341
n_d	587.6	1.90366
n_e	546.1	1.91048
n_F	486.1	1.92411
$n_{F'}$	480.0	1.92586
n_g	435.8	1.94129
n_h	404.7	1.95645
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.16701566
B_2	0.319812761
B_3	1.660044860
C_1	0.01235955240
C_2	0.0560610282
C_3	107.0477180

Constants of Formula for dn/dT	
D_0	3.53E-06
D_1	1.24E-08
D_2	-1.87E-11
E_0	8.39E-07
E_1	1.04E-09
λ_{TK} [μm]	0.275

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.4	6.4	8.8	1.9	3.8	6.1
+20/+40	4.7	7.0	9.8	3.1	5.3	8.1
+60/+80	5.0	7.4	10.5	3.7	6.1	9.2

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.560	0.230
2325	0.790	0.560
1970	0.954	0.890
1530	0.991	0.977
1060	0.999	0.997
700	0.996	0.989
660	0.994	0.985
620	0.993	0.983
580	0.993	0.982
546	0.991	0.978
500	0.980	0.950
460	0.959	0.900
436	0.940	0.850
420	0.910	0.780
405	0.850	0.660
400	0.820	0.600
390	0.710	0.420
380	0.500	0.180
370	0.180	0.010
365	0.050	0.000
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	41/37*

(*= λ_{70}/λ_5)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2236
$P_{C,s}$	0.4793
$P_{d,C}$	0.2912
$P_{e,d}$	0.2364
$P_{g,F}$	0.5953
$P_{t,h}$	
$P'_{s,t}$	0.2203
$P'_{C',s}$	0.5170
$P'_{d,C'}$	0.2420
$P'_{e,d}$	0.2329
$P'_{g,F'}$	0.5268
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0094
$\Delta P_{C,s}$	0.0034
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	0.0042
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.2
T_g [°C]	638
T_{10}^{13} [°C]	639
$T_{10}^{7.6}$ [°C]	733
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.910
ρ [g/cm ³]	4.45
E [10^3 N/mm ²]	124
μ	0.298
K [10^{-6} mm ² /N]	1.64
$HK_{0.1/20}$	666
HG	1
Abrasion Aa	88
CR	1
FR	0
SR	3
AR	1
PR	1

N-LASF46B
904313.451 $n_d = 1.90366$ $v_d = 31.32$ $n_F - n_C = 0.028852$ $n_e = 1.91048$ $v_e = 31.09$ $n_F' - n_C' = 0.029289$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.84657
$n_{1970.1}$	1970.1	1.85418
$n_{1529.6}$	1529.6	1.86283
$n_{1060.0}$	1060.0	1.87362
n_t	1014.0	1.87505
n_s	852.1	1.88146
n_f	706.5	1.89065
n_C	656.3	1.89526
$n_{C'}$	643.8	1.89657
$n_{632.8}$	632.8	1.89781
n_D	589.3	1.90341
n_d	587.6	1.90366
n_e	546.1	1.91048
n_F	486.1	1.92411
$n_{F'}$	480.0	1.92586
n_g	435.8	1.94130
n_h	404.7	1.95647
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.17988922
B_2	0.306495184
B_3	1.568824370
C_1	0.01258053840
C_2	0.0567191367
C_3	105.3165380

Constants of Formula for dn/dT	
D_0	5.98E-06
D_1	1.30E-08
D_2	-3.50E-12
E_0	9.13E-07
E_1	1.24E-09
λ_{TK} [μm]	0.267

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.1	8.2	10.7	3.6	5.6	8.1
+20/+40	6.4	8.9	11.8	4.8	7.2	10.1
+60/+80	6.8	9.5	12.7	5.5	8.2	11.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.560	0.230
2325	0.790	0.550
1970	0.954	0.890
1530	0.991	0.977
1060	0.998	0.996
700	0.996	0.989
660	0.993	0.983
620	0.992	0.980
580	0.991	0.978
546	0.989	0.972
500	0.977	0.940
460	0.954	0.890
436	0.930	0.840
420	0.900	0.770
405	0.850	0.660
400	0.820	0.600
390	0.710	0.420
380	0.500	0.180
370	0.180	0.010
365	0.050	0.000
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2222
$P_{C,s}$	0.4783
$P_{d,C}$	0.2911
$P_{e,d}$	0.2364
$P_{g,F}$	0.5956
$P_{t,h}$	
$P'_{s,t}$	0.2189
$P'_{C',s}$	0.5160
$P'_{d,C'}$	0.2419
$P'_{e,d}$	0.2329
$P'_{g,F'}$	0.5270
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0069
$\Delta P_{C,s}$	0.0024
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0045
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.1
T_g [°C]	611
T_{10}^{13} [°C]	613
$T_{10}^{7.6}$ [°C]	703
c_p [J/(g·K)]	0.550
λ [W/(m·K)]	0.880
AT [°C]	649
ρ [g/cm ³]	4.51
E [10^3 N/mm ²]	121
μ	0.303
K [10^{-6} mm ² /N]	1.87
HK _{0.1/20}	712
Abrasion Aa	55
CR	1
FR	0
SR	3.3
AR	1
PR	1
SR-J	2
WR-J	1

P-LASF47
806409.454 $n_d = 1.80610$ $v_d = 40.90$ $n_F - n_C = 0.019709$ $n_e = 1.81078$ $v_e = 40.66$ $n_{F'} - n_{C'} = 0.019941$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.76040
$n_{1970.1}$	1970.1	1.76755
$n_{1529.6}$	1529.6	1.77538
$n_{1060.0}$	1060.0	1.78432
n_t	1014.0	1.78544
n_s	852.1	1.79028
n_f	706.5	1.79696
n_C	656.3	1.80023
$n_{C'}$	643.8	1.80116
$n_{632.8}$	632.8	1.80203
n_D	589.3	1.80593
n_d	587.6	1.80610
n_e	546.1	1.81078
n_F	486.1	1.81994
$n_{F'}$	480.0	1.82110
n_g	435.8	1.83112
n_h	404.7	1.84064
n_i	365.0	1.85739
$n_{334.1}$	334.1	1.87632
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.85543101
B_2	0.315854649
B_3	1.285618390
C_1	0.01003282030
C_2	0.0387095168
C_3	94.5421507

Constants of Formula for dn/dT	
D_0	7.87E-06
D_1	1.09E-08
D_2	-1.56E-11
E_0	7.58E-07
E_1	8.92E-10
λ_{TK} [μm]	0.218

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.8	8.3	9.8	4.5	5.9	7.3
+20/+40	6.9	8.6	10.3	5.4	7.0	8.7
+60/+80	7.1	8.9	10.8	5.9	7.7	9.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.530	0.200
2325	0.780	0.530
1970	0.950	0.880
1530	0.992	0.981
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.994
546	0.998	0.994
500	0.995	0.988
460	0.990	0.975
436	0.985	0.963
420	0.980	0.950
405	0.971	0.930
400	0.967	0.920
390	0.954	0.890
380	0.930	0.830
370	0.880	0.720
365	0.840	0.650
350	0.660	0.350
334	0.250	0.030
320	0.010	
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/33
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2459
$P_{C,s}$	0.5049
$P_{d,C}$	0.2976
$P_{e,d}$	0.2376
$P_{g,F}$	0.5671
$P_{t,h}$	0.8502
$P'_{s,t}$	0.2430
$P'_{C',s}$	0.5453
$P'_{d,C'}$	0.2478
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5025
$P'_{i,h}$	0.8403

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0117
$\Delta P_{C,s}$	0.0066
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0079
$\Delta P_{i,g}$	-0.0482

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	530
T_{10}^{13} [°C]	532
$T_{10}^{7.6}$ [°C]	627
c_p [J/(g·K)]	0.550
λ [W/(m·K)]	0.850
AT [°C]	580
ρ [g/cm ³]	4.54
E [10^3 N/mm ²]	120
μ	0.298
K [10^{-6} mm ² /N]	2.39
HK _{0.1/20}	620
HG	2
Abrasion Aa	70
CR	1
FR	1
SR	51.4
AR	1
PR	2.2
SR-J	3
WR-J	1

P-LASF50
809405.454 $n_d = 1.80860$ $v_d = 40.46$ $n_F - n_C = 0.019985$ $n_e = 1.81335$ $v_e = 40.22$ $n_{F'} - n_{C'} = 0.020223$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.76261
$n_{1970.1}$	1970.1	1.76975
$n_{1529.6}$	1529.6	1.77759
$n_{1060.0}$	1060.0	1.78657
n_t	1014.0	1.78770
n_s	852.1	1.79259
n_f	706.5	1.79934
n_C	656.3	1.80266
$n_{C'}$	643.8	1.80359
$n_{632.8}$	632.8	1.80447
n_D	589.3	1.80842
n_d	587.6	1.80860
n_e	546.1	1.81335
n_F	486.1	1.82264
$n_{F'}$	480.0	1.82382
n_g	435.8	1.83399
n_h	404.7	1.84367
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.84910553
B_2	0.329828674
B_3	1.304009010
C_1	0.00999234757
C_2	0.0387437988
C_3	95.8967681

Constants of Formula for dn/dT	
D_0	8.04E-06
D_1	1.20E-08
D_2	-2.19E-11
E_0	8.20E-07
E_1	9.08E-10
λ_{TK} [μm]	0.209

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.9	8.5	10.0	4.5	6.0	7.5
+20/+40	7.1	8.9	10.6	5.5	7.3	9.0
+60/+80	7.3	9.2	11.1	6.1	8.0	9.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.530	0.200
2325	0.780	0.530
1970	0.950	0.880
1530	0.992	0.981
1060	0.999	0.998
700	0.998	0.995
660	0.997	0.993
620	0.997	0.992
580	0.997	0.992
546	0.997	0.992
500	0.995	0.987
460	0.990	0.975
436	0.985	0.963
420	0.980	0.950
405	0.971	0.930
400	0.967	0.920
390	0.954	0.890
380	0.930	0.830
370	0.880	0.720
365	0.840	0.650
350	0.660	0.350
334	0.290	0.030
320	0.030	
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	39/32
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2448
$P_{C,s}$	0.5037
$P_{d,C}$	0.2973
$P_{e,d}$	0.2376
$P_{g,F}$	0.5680
$P_{t,h}$	
$P'_{s,t}$	0.2419
$P'_{C',s}$	0.5441
$P'_{d,C'}$	0.2475
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5032
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0116
$\Delta P_{C,s}$	0.0065
$\Delta P_{F,e}$	-0.0020
$\Delta P_{g,F}$	-0.0078
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.9
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.3
T_g [°C]	527
T_{10}^{13} [°C]	526
$T_{10}^{7.6}$ [°C]	660
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.950
AT [°C]	571
ρ [g/cm ³]	4.54
E [10^3 N/mm ²]	119
μ	0.298
K [10^{-6} mm ² /N]	2.41
HK _{0.1/20}	655
Abrasion Aa	62
CR	
FR	
SR	
AR	
PR	
SR-J	3
WR-J	1

P-LASF51
810409.458 $n_d = 1.81000$ $v_d = 40.93$ $n_F - n_C = 0.019792$ $n_e = 1.81470$ $v_e = 40.68$ $n_{F'} - n_{C'} = 0.020025$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.76437
$n_{1970.1}$	1970.1	1.77145
$n_{1529.6}$	1529.6	1.77923
$n_{1060.0}$	1060.0	1.78815
n_t	1014.0	1.78927
n_s	852.1	1.79413
n_f	706.5	1.80082
n_C	656.3	1.80411
$n_{C'}$	643.8	1.80504
$n_{632.8}$	632.8	1.80591
n_D	589.3	1.80983
n_d	587.6	1.81000
n_e	546.1	1.81470
n_F	486.1	1.82390
$n_{F'}$	480.0	1.82506
n_g	435.8	1.83512
n_h	404.7	1.84467
n_i	365.0	1.86148
$n_{334.1}$	334.1	1.88043
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.84568806
B_2	0.339001600
B_3	1.324189210
C_1	0.00988495571
C_2	0.0378097402
C_3	97.8415430

Constants of Formula for dn/dT	
D_0	7.79E-06
D_1	1.10E-08
D_2	-2.03E-11
E_0	7.86E-07
E_1	8.78E-10
λ_{TK} [μm]	0.215

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.8	8.3	9.9	4.4	5.9	7.3
+20/+40	6.9	8.7	10.4	5.4	7.1	8.8
+60/+80	7.1	8.9	10.8	5.9	7.7	9.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.530	0.200
2325	0.780	0.530
1970	0.950	0.880
1530	0.992	0.981
1060	0.999	0.998
700	0.998	0.995
660	0.997	0.993
620	0.997	0.992
580	0.997	0.992
546	0.997	0.992
500	0.995	0.987
460	0.990	0.975
436	0.985	0.963
420	0.980	0.950
405	0.971	0.930
400	0.967	0.920
390	0.954	0.890
380	0.930	0.830
370	0.880	0.720
365	0.840	0.650
350	0.660	0.350
334	0.250	0.030
320	0.010	
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2453
$P_{C,s}$	0.5045
$P_{d,C}$	0.2976
$P_{e,d}$	0.2376
$P_{g,F}$	0.5670
$P_{t,h}$	0.8491
$P'_{s,t}$	0.2425
$P'_{C',s}$	0.5450
$P'_{d,C'}$	0.2477
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5024
$P'_{i,h}$	0.8392

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0107
$\Delta P_{C,s}$	0.0062
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0080
$\Delta P_{i,g}$	-0.0494

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	526
T_{10}^{13} [°C]	534
$T_{10}^{7.6}$ [°C]	629
c_p [J/(g·K)]	0.560
λ [W/(m·K)]	0.870
AT [°C]	570
ρ [g/cm ³]	4.58
E [10^3 N/mm ²]	119
μ	0.299
K [10^{-6} mm ² /N]	2.32
HK _{0.1/20}	722
Abrasion Aa	66
CR	1
FR	1
SR	51.3
AR	1
PR	2.2
SR-J	3
WR-J	1

N-SF1
717296.303 $n_d = 1.71736$ $v_d = 29.62$ $n_F - n_C = 0.024219$ $n_e = 1.72308$ $v_e = 29.39$ $n_F' - n_C' = 0.024606$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67021
$n_{1970.1}$	1970.1	1.67641
$n_{1529.6}$	1529.6	1.68350
$n_{1060.0}$	1060.0	1.69240
n_t	1014.0	1.69358
n_s	852.1	1.69889
n_f	706.5	1.70651
n_C	656.3	1.71035
$n_{C'}$	643.8	1.71144
$n_{632.8}$	632.8	1.71247
n_D	589.3	1.71715
n_d	587.6	1.71736
n_e	546.1	1.72308
n_F	486.1	1.73457
$n_{F'}$	480.0	1.73605
n_g	435.8	1.74919
n_h	404.7	1.76224
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.60865158
B_2	0.237725916
B_3	1.515306530
C_1	0.01196548790
C_2	0.0590589722
C_3	135.5216760

Constants of Formula for dn/dT	
D_0	-3.72E-06
D_1	8.05E-09
D_2	-1.71E-11
E_0	8.98E-07
E_1	1.34E-09
λ_{TK} [μm]	0.276

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.1	1.7	3.6	-2.2	-0.7	1.2
+20/+40	0.0	1.8	4.2	-1.5	0.3	2.7
+60/+80	0.0	2.1	4.8	-1.1	0.9	3.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.460
2325	0.800	0.580
1970	0.940	0.850
1530	0.989	0.973
1060	0.998	0.995
700	0.996	0.990
660	0.994	0.986
620	0.995	0.987
580	0.996	0.990
546	0.994	0.986
500	0.987	0.968
460	0.976	0.940
436	0.963	0.910
420	0.950	0.870
405	0.900	0.760
400	0.870	0.700
390	0.770	0.520
380	0.570	0.250
370	0.250	0.030
365	0.100	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2190
$P_{C,s}$	0.4733
$P_{d,C}$	0.2895
$P_{e,d}$	0.2360
$P_{g,F}$	0.6037
$P_{t,h}$	
$P'_{s,t}$	0.2156
$P'_{C',s}$	0.5103
$P'_{d,C'}$	0.2405
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5340
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0068
$\Delta P_{C,s}$	0.0013
$\Delta P_{F,e}$	0.0016
$\Delta P_{g,F}$	0.0097
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.5
T_g [°C]	553
T_{10}^{13} [°C]	554
$T_{10}^{7.6}$ [°C]	660
c_p [J/(g·K)]	0.750
λ [W/(m·K)]	1.000
ρ [g/cm ³]	3.03
E [10^3 N/mm ²]	90
μ	0.250
K [10^{-6} mm ² /N]	2.72
$HK_{0.1/20}$	540
HG	5
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF2
648338.272

 $n_d = 1.64769$ $v_d = 33.82$ $n_F - n_C = 0.019151$ $n_e = 1.65222$ $v_e = 33.56$ $n_{F'} - n_{C'} = 0.019435$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.60661
$n_{1970.1}$	1970.1	1.61268
$n_{1529.6}$	1529.6	1.61944
$n_{1060.0}$	1060.0	1.62738
n_t	1014.0	1.62839
n_s	852.1	1.63282
n_f	706.5	1.63902
n_C	656.3	1.64210
$n_{C'}$	643.8	1.64298
$n_{632.8}$	632.8	1.64380
n_D	589.3	1.64752
n_d	587.6	1.64769
n_e	546.1	1.65222
n_F	486.1	1.66125
$n_{F'}$	480.0	1.66241
n_g	435.8	1.67265
n_h	404.7	1.68273
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.47343127
B_2	0.163681849
B_3	1.369208990
C_1	0.01090190980
C_2	0.0585683687
C_3	127.4049330

Constants of Formula for dn/dT	
D_0	3.10E-06
D_1	1.75E-08
D_2	6.62E-11
E_0	7.51E-07
E_1	8.99E-10
λ_{TK} [μm]	0.277

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.4	4.8	6.4	1.3	2.5	4.1
+20/+40	3.5	5.1	7.0	2.1	3.6	5.5
+60/+80	4.2	5.9	8.0	3.1	4.8	6.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.850	0.670
2325	0.900	0.760
1970	0.971	0.930
1530	0.994	0.984
1060	0.999	0.997
700	0.995	0.987
660	0.994	0.984
620	0.994	0.984
580	0.995	0.987
546	0.994	0.986
500	0.990	0.975
460	0.984	0.961
436	0.979	0.950
420	0.970	0.930
405	0.940	0.870
400	0.930	0.830
390	0.860	0.680
380	0.690	0.400
370	0.330	0.060
365	0.130	0.010
350	0.000	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/36

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2311
$P_{C,s}$	0.4848
$P_{d,C}$	0.2918
$P_{e,d}$	0.2364
$P_{g,F}$	0.5950
$P_{t,h}$	
$P'_{s,t}$	0.2277
$P'_{C',s}$	0.5228
$P'_{d,C'}$	0.2425
$P'_{e,d}$	0.2329
$P'_{g,F'}$	0.5267
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0106
$\Delta P_{C,s}$	0.0031
$\Delta P_{F,e}$	0.0012
$\Delta P_{g,F}$	0.0081
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.7
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.8
T_g [°C]	608
T_{10}^{13} [°C]	607
$T_{10}^{7.6}$ [°C]	731
c_p [J/(g·K)]	0.790
λ [W/(m·K)]	1.140
ρ [g/cm ³]	2.72
E [10^3 N/mm ²]	86
μ	0.231
K [10^{-6} mm ² /N]	3.06
$HK_{0.1/20}$	539
CR	1
FR	0
SR	1
AR	1.2
PR	1

N-SF4
755274.315

$n_d = 1.75513$

$v_d = 27.38$

$n_F - n_C = 0.027583$

$n_e = 1.76164$

$v_e = 27.16$

$n_F' - n_C' = 0.028044$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70434
$n_{1970.1}$	1970.1	1.71052
$n_{1529.6}$	1529.6	1.71773
$n_{1060.0}$	1060.0	1.72717
n_t	1014.0	1.72846
n_s	852.1	1.73432
n_f	706.5	1.74286
n_C	656.3	1.74719
$n_{C'}$	643.8	1.74842
$n_{632.8}$	632.8	1.74959
n_D	589.3	1.75489
n_d	587.6	1.75513
n_e	546.1	1.76164
n_F	486.1	1.77477
$n_{F'}$	480.0	1.77647
n_g	435.8	1.79158
n_h	404.7	1.80668
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.67780282
B_2	0.282849893
B_3	1.635392760
C_1	0.01267934500
C_2	0.0602038419
C_3	145.7604960

Constants of Formula for dn/dT	
D_0	-4.88E-06
D_1	6.57E-09
D_2	-2.72E-11
E_0	9.67E-07
E_1	1.48E-09
λ_{TK} [μm]	0.282

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.5	1.2	3.5	-2.9	-1.2	1.0
+20/+40	-0.7	1.4	4.2	-2.2	-0.1	2.6
+60/+80	-0.8	1.6	4.7	-1.9	0.4	3.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.530
2325	0.820	0.600
1970	0.940	0.860
1530	0.992	0.980
1060	0.999	0.999
700	0.994	0.984
660	0.991	0.978
620	0.992	0.979
580	0.993	0.982
546	0.991	0.977
500	0.979	0.950
460	0.961	0.910
436	0.940	0.860
420	0.920	0.800
405	0.860	0.690
400	0.830	0.630
390	0.740	0.470
380	0.560	0.240
370	0.250	0.030
365	0.100	0.000
350	0.000	0.000
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	43/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2123
$P_{C,s}$	0.4666
$P_{d,C}$	0.2880
$P_{e,d}$	0.2358
$P_{g,F}$	0.6096
$P_{t,h}$	
$P'_{s,t}$	0.2088
$P'_{C',s}$	0.5030
$P'_{d,C'}$	0.2392
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5390
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0040
$\Delta P_{C,s}$	-0.0002
$\Delta P_{F,e}$	0.0022
$\Delta P_{g,F}$	0.0118
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.9
T_g [°C]	570
T_{10}^{13} [°C]	559
$T_{10}^{7.6}$ [°C]	661
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	0.950
ρ [g/cm ³]	3.15
E [10^3 N/mm ²]	90
μ	0.256
K [10^{-6} mm ² /N]	2.76
$HK_{0.1/20}$	520
HG	6
CR	1
FR	0
SR	1.3
AR	1
PR	1

N-SF5
673323.286

 $n_d = 1.67271$ $v_d = 32.25$ $n_F - n_C = 0.020858$ $n_e = 1.67763$ $v_e = 32.00$ $n_F' - n_C' = 0.021177$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.62935
$n_{1970.1}$	1970.1	1.63554
$n_{1529.6}$	1529.6	1.64249
$n_{1060.0}$	1060.0	1.65080
n_t	1014.0	1.65188
n_s	852.1	1.65661
n_f	706.5	1.66330
n_C	656.3	1.66664
$n_{C'}$	643.8	1.66759
$n_{632.8}$	632.8	1.66848
n_D	589.3	1.67253
n_d	587.6	1.67271
n_e	546.1	1.67763
n_F	486.1	1.68750
$n_{F'}$	480.0	1.68876
n_g	435.8	1.69998
n_h	404.7	1.71106
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.52481889
B_2	0.187085527
B_3	1.427290150
C_1	0.01125475600
C_2	0.0588995392
C_3	129.1416750

Constants of Formula for dn/dT	
D_0	-2.51E-07
D_1	1.07E-08
D_2	-2.40E-11
E_0	7.85E-07
E_1	1.15E-09
λ_{TK} [μm]	0.278

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.8	3.1	4.8	-0.5	0.8	2.5
+20/+40	1.8	3.4	5.5	0.4	2.0	4.0
+60/+80	1.9	3.7	6.0	0.8	2.5	4.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.500
2325	0.830	0.630
1970	0.950	0.880
1530	0.990	0.975
1060	0.998	0.994
700	0.996	0.989
660	0.995	0.987
620	0.995	0.988
580	0.996	0.991
546	0.995	0.988
500	0.990	0.976
460	0.982	0.956
436	0.973	0.940
420	0.963	0.910
405	0.930	0.830
400	0.910	0.780
390	0.830	0.620
380	0.640	0.330
370	0.280	0.040
365	0.120	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2270
$P_{C,s}$	0.4807
$P_{d,C}$	0.2910
$P_{e,d}$	0.2362
$P_{g,F}$	0.5984
$P_{t,h}$	
$P'_{s,t}$	0.2236
$P'_{C',s}$	0.5184
$P'_{d,C'}$	0.2418
$P'_{e,d}$	0.2327
$P'_{g,F'}$	0.5295
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0097
$\Delta P_{C,s}$	0.0027
$\Delta P_{F,e}$	0.0014
$\Delta P_{g,F}$	0.0088
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.9
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	578
T_{10}^{13} [°C]	576
$T_{10}^{7.6}$ [°C]	693
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.000
ρ [g/cm ³]	2.86
E [10^3 N/mm ²]	87
μ	0.237
K [10^{-6} mm ² /N]	2.99
$HK_{0.1/20}$	620
HG	3
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF6
805254.337 $n_d = 1.80518$ $v_d = 25.36$ $n_F - n_C = 0.031750$ $n_e = 1.81266$ $v_e = 25.16$ $n_F' - n_C' = 0.032304$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.74895
$n_{1970.1}$	1970.1	1.75541
$n_{1529.6}$	1529.6	1.76307
$n_{1060.0}$	1060.0	1.77341
n_t	1014.0	1.77486
n_s	852.1	1.78144
n_f	706.5	1.79114
n_C	656.3	1.79608
$n_{C'}$	643.8	1.79749
$n_{632.8}$	632.8	1.79883
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81266
n_F	486.1	1.82783
$n_{F'}$	480.0	1.82980
n_g	435.8	1.84738
n_h	404.7	1.86506
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.77931763
B_2	0.338149866
B_3	2.087344740
C_1	0.01337141820
C_2	0.0617533621
C_3	174.0175900

Constants of Formula for dn/dT	
D_0	-4.93E-06
D_1	7.02E-09
D_2	-2.40E-11
E_0	9.84E-07
E_1	1.54E-09
λ_{TK} [μm]	0.290

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.7	1.2	3.9	-3.0	-1.2	1.3
+20/+40	-0.8	1.5	4.8	-2.3	0.0	3.1
+60/+80	-0.8	1.8	5.4	-2.0	0.6	4.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.780	0.530
2325	0.810	0.590
1970	0.940	0.860
1530	0.991	0.978
1060	0.998	0.996
700	0.993	0.983
660	0.990	0.976
620	0.991	0.978
580	0.992	0.980
546	0.989	0.972
500	0.977	0.940
460	0.961	0.910
436	0.950	0.870
420	0.920	0.810
405	0.860	0.680
400	0.820	0.610
390	0.700	0.410
380	0.480	0.160
370	0.160	0.010
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	45/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2074
$P_{C,s}$	0.4610
$P_{d,C}$	0.2867
$P_{e,d}$	0.2356
$P_{g,F}$	0.6158
$P_{t,h}$	
$P'_{s,t}$	0.2039
$P'_{C',s}$	0.4969
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	-0.0010
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0146
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.3
T_g [°C]	589
T_{10}^{13} [°C]	593
$T_{10}^{7.6}$ [°C]	669
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.960
ρ [g/cm ³]	3.37
E [10^3 N/mm ²]	93
μ	0.262
K [10^{-6} mm ² /N]	2.82
$HK_{0.1/20}$	550
HG	4
CR	1
FR	0
SR	2
AR	1
PR	1

N-SF6HT
805254.337 $n_d = 1.80518$ $v_d = 25.36$ $n_F - n_C = 0.031750$ $n_e = 1.81266$ $v_e = 25.16$ $n_F' - n_C' = 0.032304$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.74895
$n_{1970.1}$	1970.1	1.75541
$n_{1529.6}$	1529.6	1.76307
$n_{1060.0}$	1060.0	1.77341
n_t	1014.0	1.77486
n_s	852.1	1.78144
n_f	706.5	1.79114
n_C	656.3	1.79608
$n_{C'}$	643.8	1.79749
$n_{632.8}$	632.8	1.79883
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81266
n_F	486.1	1.82783
$n_{F'}$	480.0	1.82980
n_g	435.8	1.84738
n_h	404.7	1.86506
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.77931763
B_2	0.338149866
B_3	2.087344740
C_1	0.01337141820
C_2	0.0617533621
C_3	174.0175900

Constants of Formula for dn/dT	
D_0	-4.93E-06
D_1	7.02E-09
D_2	-2.40E-11
E_0	9.84E-07
E_1	1.54E-09
λ_{TK} [μm]	0.290

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.7	1.2	3.9	-3.0	-1.2	1.3
+20/+40	-0.8	1.5	4.8	-2.3	0.0	3.1
+60/+80	-0.8	1.8	5.4	-2.0	0.6	4.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.790	0.560
2325	0.830	0.620
1970	0.950	0.870
1530	0.992	0.980
1060	0.999	0.997
700	0.994	0.984
660	0.991	0.977
620	0.992	0.979
580	0.992	0.981
546	0.990	0.975
500	0.980	0.950
460	0.966	0.920
436	0.954	0.890
420	0.940	0.850
405	0.900	0.770
400	0.880	0.720
390	0.790	0.560
380	0.590	0.270
370	0.210	0.020
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	44/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2074
$P_{C,s}$	0.4610
$P_{d,C}$	0.2867
$P_{e,d}$	0.2356
$P_{g,F}$	0.6158
$P_{t,h}$	
$P'_{s,t}$	0.2039
$P'_{C',s}$	0.4969
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	-0.0010
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0146
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.3
T_g [°C]	589
T_{10}^{13} [°C]	590
$T_{10}^{7.6}$ [°C]	683
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.960
ρ [g/cm ³]	3.37
E [10^3 N/mm ²]	93
μ	0.262
K [10^{-6} mm ² /N]	2.82
$HK_{0.1/20}$	550
HG	4
CR	1
FR	0
SR	2
AR	1
PR	1

N-SF6HTultra
805254.337 $n_d = 1.80518$ $v_d = 25.36$ $n_F - n_C = 0.031750$ $n_e = 1.81266$ $v_e = 25.16$ $n_F' - n_C' = 0.032304$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.74895
$n_{1970.1}$	1970.1	1.75541
$n_{1529.6}$	1529.6	1.76307
$n_{1060.0}$	1060.0	1.77341
n_t	1014.0	1.77486
n_s	852.1	1.78144
n_f	706.5	1.79114
n_C	656.3	1.79608
$n_{C'}$	643.8	1.79749
$n_{632.8}$	632.8	1.79883
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81266
n_F	486.1	1.82783
$n_{F'}$	480.0	1.82980
n_g	435.8	1.84738
n_h	404.7	1.86506
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.77931763
B_2	0.338149866
B_3	2.087344740
C_1	0.01337141820
C_2	0.0617533621
C_3	174.0175900

Constants of Formula for dn/dT	
D_0	-4.93E-06
D_1	7.02E-09
D_2	-2.40E-11
E_0	9.84E-07
E_1	1.54E-09
λ_{TK} [μm]	0.290

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.7	1.2	3.9	-3.0	-1.2	1.3
+20/+40	-0.8	1.5	4.8	-2.3	0.0	3.1
+60/+80	-0.8	1.8	5.4	-2.0	0.6	4.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.800	0.570
2325	0.830	0.620
1970	0.950	0.880
1530	0.992	0.981
1060	0.999	0.999
700	0.994	0.984
660	0.991	0.978
620	0.992	0.980
580	0.994	0.984
546	0.992	0.981
500	0.984	0.960
460	0.972	0.930
436	0.961	0.910
420	0.950	0.870
405	0.910	0.790
400	0.890	0.740
390	0.800	0.580
380	0.600	0.280
370	0.220	0.020
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	43/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2074
$P_{C,s}$	0.4610
$P_{d,C}$	0.2867
$P_{e,d}$	0.2356
$P_{g,F}$	0.6158
$P_{t,h}$	
$P'_{s,t}$	0.2039
$P'_{C',s}$	0.4969
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	-0.0010
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0146
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.3
T_g [°C]	589
T_{10}^{13} [°C]	590
$T_{10}^{7.6}$ [°C]	683
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.960
ρ [g/cm ³]	3.37
E [10^3 N/mm ²]	93
μ	0.262
K [10^{-6} mm ² /N]	2.82
$HK_{0.1/20}$	550
HG	4
CR	1
FR	0
SR	2
AR	1
PR	1

N-SF8
689313.290 $n_d = 1.68894$ $v_d = 31.31$ $n_F - n_C = 0.022005$ $n_e = 1.69413$ $v_e = 31.06$ $n_F' - n_C' = 0.022346$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.64448
$n_{1970.1}$	1970.1	1.65060
$n_{1529.6}$	1529.6	1.65753
$n_{1060.0}$	1060.0	1.66600
n_t	1014.0	1.66711
n_s	852.1	1.67203
n_f	706.5	1.67904
n_C	656.3	1.68254
$n_{C'}$	643.8	1.68354
$n_{632.8}$	632.8	1.68448
n_D	589.3	1.68874
n_d	587.6	1.68894
n_e	546.1	1.69413
n_F	486.1	1.70455
$n_{F'}$	480.0	1.70589
n_g	435.8	1.71775
n_h	404.7	1.72948
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.55075812
B_2	0.209816918
B_3	1.462054910
C_1	0.01143383440
C_2	0.0582725652
C_3	133.2416500

Constants of Formula for dn/dT	
D_0	-1.94E-06
D_1	9.70E-09
D_2	-2.34E-11
E_0	8.32E-07
E_1	1.15E-09
λ_{TK} [μm]	0.276

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.0	2.4	4.2	-1.3	0.1	1.8
+20/+40	0.9	2.6	4.8	-0.5	1.2	3.3
+60/+80	1.0	2.9	5.3	-0.1	1.7	4.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.750	0.480
2325	0.820	0.600
1970	0.950	0.870
1530	0.988	0.970
1060	0.997	0.993
700	0.995	0.987
660	0.993	0.983
620	0.993	0.983
580	0.994	0.986
546	0.993	0.983
500	0.985	0.963
460	0.976	0.940
436	0.965	0.910
420	0.950	0.880
405	0.920	0.810
400	0.900	0.770
390	0.830	0.630
380	0.670	0.370
370	0.350	0.070
365	0.160	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2236
$P_{C,s}$	0.4778
$P_{d,C}$	0.2905
$P_{e,d}$	0.2362
$P_{g,F}$	0.5999
$P_{t,h}$	
$P'_{s,t}$	0.2202
$P'_{C',s}$	0.5152
$P'_{d,C'}$	0.2413
$P'_{e,d}$	0.2326
$P'_{g,F'}$	0.5308
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0080
$\Delta P_{C,s}$	0.0019
$\Delta P_{F,e}$	0.0014
$\Delta P_{g,F}$	0.0087
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.9
T_g [°C]	567
T_{10}^{13} [°C]	564
$T_{10}^{7.6}$ [°C]	678
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	1.030
ρ [g/cm ³]	2.90
E [10^3 N/mm ²]	88
μ	0.245
K [10^{-6} mm ² /N]	2.95
$HK_{0.1/20}$	600
HG	4
CR	1
FR	0
SR	1
AR	1
PR	1
SR-J	1
WR-J	1

N-SF10
728285.305 $n_d = 1.72828$ $v_d = 28.53$ $n_F - n_C = 0.025524$ $n_e = 1.73430$ $v_e = 28.31$ $n_F' - n_C' = 0.025941$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67981
$n_{1970.1}$	1970.1	1.68597
$n_{1529.6}$	1529.6	1.69308
$n_{1060.0}$	1060.0	1.70217
n_t	1014.0	1.70340
n_s	852.1	1.70891
n_f	706.5	1.71688
n_C	656.3	1.72091
$n_{C'}$	643.8	1.72206
$n_{632.8}$	632.8	1.72314
n_D	589.3	1.72806
n_d	587.6	1.72828
n_e	546.1	1.73430
n_F	486.1	1.74643
$n_{F'}$	480.0	1.74800
n_g	435.8	1.76191
n_h	404.7	1.77578
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.62153902
B_2	0.256287842
B_3	1.644475520
C_1	0.01222414570
C_2	0.0595736775
C_3	147.4687930

Constants of Formula for dn/dT	
D_0	-4.68E-06
D_1	7.41E-09
D_2	-1.89E-11
E_0	9.49E-07
E_1	1.42E-09
λ_{TK} [μm]	0.279

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.4	1.3	3.4	-2.7	-1.1	1.0
+20/+40	-0.5	1.5	4.1	-2.0	-0.1	2.5
+60/+80	-0.5	1.7	4.6	-1.7	0.5	3.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.850	0.660
2325	0.900	0.760
1970	0.971	0.930
1530	0.994	0.985
1060	0.996	0.990
700	0.993	0.983
660	0.990	0.976
620	0.991	0.977
580	0.991	0.978
546	0.989	0.973
500	0.978	0.950
460	0.963	0.910
436	0.950	0.870
420	0.920	0.820
405	0.870	0.700
400	0.840	0.640
390	0.730	0.450
380	0.530	0.200
370	0.180	
365	0.060	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2160
$P_{C,s}$	0.4701
$P_{d,C}$	0.2888
$P_{e,d}$	0.2359
$P_{g,F}$	0.6066
$P_{t,h}$	
$P'_{s,t}$	0.2125
$P'_{C',s}$	0.5068
$P'_{d,C'}$	0.2398
$P'_{e,d}$	0.2321
$P'_{g,F'}$	0.5365
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0057
$\Delta P_{C,s}$	0.0007
$\Delta P_{F,e}$	0.0019
$\Delta P_{g,F}$	0.0108
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.8
T_g [°C]	559
T_{10}^{13} [°C]	549
$T_{10}^{7.6}$ [°C]	652
c_p [J/(g·K)]	0.740
λ [W/(m·K)]	0.960
ρ [g/cm ³]	3.05
E [10^3 N/mm ²]	87
μ	0.252
K [10^{-6} mm ² /N]	2.92
$HK_{0.1/20}$	540
HG	5
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF11
785257.322

 $n_d = 1.78472$ $v_d = 25.68$ $n_F - n_C = 0.030558$ $n_e = 1.79192$ $v_e = 25.47$ $n_F' - n_C' = 0.031088$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.72937
$n_{1970.1}$	1970.1	1.73600
$n_{1529.6}$	1529.6	1.74377
$n_{1060.0}$	1060.0	1.75401
n_t	1014.0	1.75542
n_s	852.1	1.76182
n_f	706.5	1.77119
n_C	656.3	1.77596
$n_{C'}$	643.8	1.77732
$n_{632.8}$	632.8	1.77860
n_D	589.3	1.78446
n_d	587.6	1.78472
n_e	546.1	1.79192
n_F	486.1	1.80651
$n_{F'}$	480.0	1.80841
n_g	435.8	1.82533
n_h	404.7	1.84235
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.73759695
B_2	0.313747346
B_3	1.898781010
C_1	0.01318870700
C_2	0.0623068142
C_3	155.2362900

Constants of Formula for dn/dT	
D_0	-3.56E-06
D_1	9.20E-09
D_2	-2.10E-11
E_0	9.65E-07
E_1	1.44E-09
λ_{TK} [μm]	0.294

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.1	2.0	4.6	-2.3	-0.5	2.1
+20/+40	0.1	2.4	5.6	-1.4	0.8	4.0
+60/+80	0.2	2.7	6.3	-1.0	1.5	5.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.830	0.620
2325	0.870	0.700
1970	0.965	0.920
1530	0.994	0.985
1060	0.999	0.998
700	0.994	0.985
660	0.992	0.981
620	0.992	0.981
580	0.994	0.984
546	0.991	0.978
500	0.981	0.953
460	0.967	0.920
436	0.950	0.870
420	0.920	0.810
405	0.850	0.670
400	0.820	0.600
390	0.690	0.390
380	0.430	0.120
370	0.080	0.000
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	44/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2095
$P_{C,s}$	0.4625
$P_{d,C}$	0.2868
$P_{e,d}$	0.2355
$P_{g,F}$	0.6156
$P_{t,h}$	
$P'_{s,t}$	0.2059
$P'_{C',s}$	0.4984
$P'_{d,C'}$	0.2381
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5442
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0052
$\Delta P_{C,s}$	-0.0003
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0150
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.9
T_g [°C]	592
T_{10}^{13} [°C]	590
$T_{10}^{7.6}$ [°C]	688
c_p [J/(g·K)]	0.710
λ [W/(m·K)]	0.950
ρ [g/cm ³]	3.22
E [10^3 N/mm ²]	92
μ	0.257
K [10^{-6} mm ² /N]	2.94
$HK_{0.1/20}$	615
HG	4
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF14
762265.312 $n_d = 1.76182$ $v_d = 26.53$ $n_F - n_C = 0.028715$ $n_e = 1.76859$ $v_e = 26.32$ $n_F' - n_C' = 0.029204$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70954
$n_{1970.1}$	1970.1	1.71581
$n_{1529.6}$	1529.6	1.72315
$n_{1060.0}$	1060.0	1.73284
n_i	1014.0	1.73417
n_s	852.1	1.74022
n_f	706.5	1.74907
n_C	656.3	1.75356
$n_{C'}$	643.8	1.75485
$n_{632.8}$	632.8	1.75606
n_D	589.3	1.76157
n_d	587.6	1.76182
n_e	546.1	1.76859
n_F	486.1	1.78228
$n_{F'}$	480.0	1.78405
n_g	435.8	1.79986
n_h	404.7	1.81570
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.69022361
B_2	0.288870052
B_3	1.704518700
C_1	0.01305121130
C_2	0.0613691880
C_3	149.5176890

Constants of Formula for dn/dT	
D_0	-5.56E-06
D_1	7.09E-09
D_2	-1.09E-11
E_0	9.85E-07
E_1	1.39E-09
λ_{TK} [μm]	0.287

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.9	0.9	3.4	-3.2	-1.5	0.9
+20/+40	-1.1	1.1	4.1	-2.6	-0.4	2.5
+60/+80	-1.1	1.4	4.7	-2.2	0.2	3.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.800	0.570
2325	0.840	0.640
1970	0.950	0.880
1530	0.992	0.980
1060	0.999	0.998
700	0.994	0.985
660	0.991	0.978
620	0.992	0.980
580	0.994	0.984
546	0.992	0.981
500	0.984	0.960
460	0.971	0.930
436	0.963	0.910
420	0.950	0.870
405	0.910	0.790
400	0.890	0.750
390	0.820	0.610
380	0.640	0.330
370	0.280	0.040
365	0.100	0.000
350	0.000	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2107
$P_{C,s}$	0.4646
$P_{d,C}$	0.2875
$P_{e,d}$	0.2357
$P_{g,F}$	0.6122
$P_{t,h}$	
$P'_{s,t}$	0.2072
$P'_{C',s}$	0.5008
$P'_{d,C'}$	0.2387
$P'_{e,d}$	0.2318
$P'_{g,F'}$	0.5413
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0044
$\Delta P_{C,s}$	-0.0002
$\Delta P_{F,e}$	0.0024
$\Delta P_{g,F}$	0.0130
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	10.9
T_g [°C]	566
T_{10}^{13} [°C]	562
$T_{10}^{7.6}$ [°C]	657
c_p [J/(g·K)]	0.750
λ [W/(m·K)]	1.000
ρ [g/cm ³]	3.12
E [10^3 N/mm ²]	88
μ	0.259
K [10^{-6} mm ² /N]	2.89
$HK_{0.1/20}$	515
HG	5
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF15
699302.292 $n_d = 1.69892$ $v_d = 30.20$ $n_F - n_C = 0.023142$ $n_e = 1.70438$ $v_e = 29.96$ $n_F' - n_C' = 0.023511$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.65267
$n_{1970.1}$	1970.1	1.65899
$n_{1529.6}$	1529.6	1.66616
$n_{1060.0}$	1060.0	1.67494
n_t	1014.0	1.67609
n_s	852.1	1.68122
n_f	706.5	1.68854
n_C	656.3	1.69222
$n_{C'}$	643.8	1.69326
$n_{632.8}$	632.8	1.69425
n_D	589.3	1.69872
n_d	587.6	1.69892
n_e	546.1	1.70438
n_F	486.1	1.71536
$n_{F'}$	480.0	1.71677
n_g	435.8	1.72933
n_h	404.7	1.74182
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.57055634
B_2	0.218987094
B_3	1.508240170
C_1	0.01165070140
C_2	0.0597856897
C_3	132.7093390

Constants of Formula for dn/dT	
D_0	-7.15E-07
D_1	1.04E-08
D_2	-2.62E-11
E_0	8.56E-07
E_1	1.29E-09
λ_{TK} [μm]	0.281

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	1.6	3.1	5.0	-0.7	0.8	2.6
+20/+40	1.6	3.4	5.8	0.2	2.0	4.3
+60/+80	1.7	3.7	6.4	0.6	2.6	5.2

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.510
2325	0.840	0.640
1970	0.954	0.890
1530	0.990	0.976
1060	0.998	0.996
700	0.995	0.988
660	0.993	0.983
620	0.994	0.984
580	0.994	0.986
546	0.994	0.985
500	0.988	0.970
460	0.977	0.940
436	0.964	0.910
420	0.940	0.860
405	0.890	0.740
400	0.860	0.680
390	0.750	0.480
380	0.530	0.200
370	0.160	0.010
365	0.040	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/37

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.2216
$P_{C,s}$	0.4751
$P_{d,C}$	0.2897
$P_{e,d}$	0.2360
$P_{g,F}$	0.6038
$P_{t,h}$	
$P'_{s,t}$	0.2181
$P'_{C',s}$	0.5122
$P'_{d,C'}$	0.2406
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5341
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0085
$\Delta P_{C,s}$	0.0018
$\Delta P_{F,e}$	0.0018
$\Delta P_{g,F}$	0.0108
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.3
T_g [°C]	580
T_{10}^{13} [°C]	578
$T_{10}^{7.6}$ [°C]	692
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.040
ρ [g/cm ³]	2.92
E [10^3 N/mm ²]	90
μ	0.243
K [10^{-6} mm ² /N]	3.04
$HK_{0.1/20}$	610
HG	3
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF57
847238.353

 $n_d = 1.84666$ $v_d = 23.78$ $n_F - n_C = 0.035604$ $n_e = 1.85504$ $v_e = 23.59$ $n_{F'} - n_{C'} = 0.036247$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78502
$n_{1970.1}$	1970.1	1.79190
$n_{1529.6}$	1529.6	1.80011
$n_{1060.0}$	1060.0	1.81138
n_t	1014.0	1.81296
n_s	852.1	1.82023
n_f	706.5	1.83099
n_C	656.3	1.83650
$n_{C'}$	643.8	1.83807
$n_{632.8}$	632.8	1.83956
n_D	589.3	1.84635
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87210
$n_{F'}$	480.0	1.87432
n_g	435.8	1.89423
n_h	404.7	1.91440
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87543831
B_2	0.373757490
B_3	2.300017970
C_1	0.01417495180
C_2	0.0640509927
C_3	177.3897950

Constants of Formula for dn/dT	
D_0	-4.51E-06
D_1	8.73E-09
D_2	-1.64E-11
E_0	1.07E-06
E_1	1.57E-09
λ_{TK} [μm]	0.295

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.5	1.7	4.9	-2.9	-0.8	2.3
+20/+40	-0.5	2.2	6.0	-2.1	0.6	4.3
+60/+80	-0.4	2.6	6.9	-1.6	1.3	5.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.840	0.640
1970	0.956	0.890
1530	0.992	0.980
1060	0.999	0.997
700	0.991	0.977
660	0.987	0.969
620	0.988	0.971
580	0.990	0.975
546	0.986	0.965
500	0.971	0.930
460	0.950	0.880
436	0.920	0.810
420	0.870	0.710
405	0.780	0.540
400	0.730	0.460
390	0.570	0.250
380	0.300	0.050
370	0.060	0.000
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2042
$P_{C,s}$	0.4568
$P_{d,C}$	0.2855
$P_{e,d}$	0.2353
$P_{g,F}$	0.6216
$P_{t,h}$	
$P'_{s,t}$	0.2005
$P'_{C',s}$	0.4922
$P'_{d,C'}$	0.2369
$P'_{e,d}$	0.2311
$P'_{g,F'}$	0.5493
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0032
$\Delta P_{C,s}$	-0.0015
$\Delta P_{F,e}$	0.0033
$\Delta P_{g,F}$	0.0178
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.9
T_g [°C]	629
T_{10}^{13} [°C]	616
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	0.990
ρ [g/cm ³]	3.53
E [10^3 N/mm ²]	96
μ	0.260
K [10^{-6} mm ² /N]	2.78
$HK_{0.1/20}$	520
HG	4
Abrasion Aa	175
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF57HT
847238.353

 $n_d = 1.84666$ $v_d = 23.78$ $n_F - n_C = 0.035604$ $n_e = 1.85504$ $v_e = 23.59$ $n_F' - n_C' = 0.036247$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78502
$n_{1970.1}$	1970.1	1.79190
$n_{1529.6}$	1529.6	1.80011
$n_{1060.0}$	1060.0	1.81138
n_t	1014.0	1.81296
n_s	852.1	1.82023
n_f	706.5	1.83099
n_C	656.3	1.83650
$n_{C'}$	643.8	1.83807
$n_{632.8}$	632.8	1.83956
n_D	589.3	1.84635
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87210
$n_{F'}$	480.0	1.87432
n_g	435.8	1.89423
n_h	404.7	1.91440
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87543831
B_2	0.373757490
B_3	2.300017970
C_1	0.01417495180
C_2	0.0640509927
C_3	177.3897950

Constants of Formula for dn/dT	
D_0	-4.51E-06
D_1	8.73E-09
D_2	-1.64E-11
E_0	1.07E-06
E_1	1.57E-09
λ_{TK} [μm]	0.295

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.5	1.7	4.9	-2.9	-0.8	2.3
+20/+40	-0.5	2.2	6.0	-2.1	0.6	4.3
+60/+80	-0.4	2.6	6.9	-1.6	1.3	5.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.840	0.640
1970	0.956	0.890
1530	0.992	0.980
1060	0.999	0.998
700	0.992	0.979
660	0.988	0.971
620	0.989	0.973
580	0.991	0.977
546	0.987	0.967
500	0.972	0.930
460	0.951	0.880
436	0.930	0.830
420	0.900	0.760
405	0.830	0.630
400	0.790	0.560
390	0.660	0.350
380	0.380	0.090
370	0.060	0.000
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2042
$P_{C,s}$	0.4568
$P_{d,C}$	0.2855
$P_{e,d}$	0.2353
$P_{g,F}$	0.6216
$P_{t,h}$	
$P'_{s,t}$	0.2005
$P'_{C',s}$	0.4922
$P'_{d,C'}$	0.2369
$P'_{e,d}$	0.2311
$P'_{g,F'}$	0.5493
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0032
$\Delta P_{C,s}$	-0.0015
$\Delta P_{F,e}$	0.0033
$\Delta P_{g,F}$	0.0178
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.9
T_g [°C]	629
T_{10}^{13} [°C]	616
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	0.990
ρ [g/cm ³]	3.53
E [10^3 N/mm ²]	96
μ	0.260
K [10^{-6} mm ² /N]	2.78
$HK_{0.1/20}$	520
HG	4
Abrasion Aa	175
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF57HTultra
847238.353

$n_d = 1.84666$

$v_d = 23.78$

$n_F - n_C = 0.035604$

$n_e = 1.85504$

$v_e = 23.59$

$n_F' - n_C' = 0.036247$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.78502
$n_{1970.1}$	1970.1	1.79190
$n_{1529.6}$	1529.6	1.80011
$n_{1060.0}$	1060.0	1.81138
n_t	1014.0	1.81296
n_s	852.1	1.82023
n_f	706.5	1.83099
n_C	656.3	1.83650
$n_{C'}$	643.8	1.83807
$n_{632.8}$	632.8	1.83956
n_D	589.3	1.84635
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87210
$n_{F'}$	480.0	1.87432
n_g	435.8	1.89423
n_h	404.7	1.91440
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.87543831
B_2	0.373757490
B_3	2.300017970
C_1	0.01417495180
C_2	0.0640509927
C_3	177.3897950

Constants of Formula for dn/dT	
D_0	-4.51E-06
D_1	8.73E-09
D_2	-1.64E-11
E_0	1.07E-06
E_1	1.57E-09
λ_{TK} [μm]	0.295

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.5	1.7	4.9	-2.9	-0.8	2.3
+20/+40	-0.5	2.2	6.0	-2.1	0.6	4.3
+60/+80	-0.4	2.6	6.9	-1.6	1.3	5.6

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.810	0.580
2325	0.840	0.640
1970	0.956	0.890
1530	0.992	0.980
1060	0.999	0.998
700	0.995	0.988
660	0.994	0.985
620	0.993	0.983
580	0.992	0.981
546	0.989	0.973
500	0.978	0.950
460	0.962	0.910
436	0.940	0.860
420	0.920	0.810
405	0.860	0.690
400	0.830	0.630
390	0.700	0.410
380	0.420	0.110
370	0.060	0.000
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	

Relative Partial Dispersion	
$P_{s,t}$	0.2042
$P_{C,s}$	0.4568
$P_{d,C}$	0.2855
$P_{e,d}$	0.2353
$P_{g,F}$	0.6216
$P_{t,h}$	
$P'_{s,t}$	0.2005
$P'_{C',s}$	0.4922
$P'_{d,C'}$	0.2369
$P'_{e,d}$	0.2311
$P'_{g,F'}$	0.5493
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0032
$\Delta P_{C,s}$	-0.0015
$\Delta P_{F,e}$	0.0033
$\Delta P_{g,F}$	0.0178
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.9
T_g [°C]	629
T_{10}^{13} [°C]	616
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	0.990
ρ [g/cm ³]	3.53
E [10^3 N/mm ²]	96
μ	0.260
K [10^{-6} mm ² /N]	2.78
$HK_{0.1/20}$	520
HG	4
Abrasion Aa	175
CR	1
FR	0
SR	1
AR	1
PR	1

N-SF66
923209.400 $n_d = 1.92286$ $v_d = 20.88$ $n_F - n_C = 0.044199$ $n_e = 1.93322$ $v_e = 20.70$ $n_F' - n_C' = 0.045076$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.84839
$n_{1970.1}$	1970.1	1.85665
$n_{1529.6}$	1529.6	1.86650
$n_{1060.0}$	1060.0	1.87999
n_t	1014.0	1.88189
n_s	852.1	1.89064
n_f	706.5	1.90368
n_C	656.3	1.91039
$n_{C'}$	643.8	1.91232
$n_{632.8}$	632.8	1.91414
n_D	589.3	1.92248
n_d	587.6	1.92286
n_e	546.1	1.93322
n_F	486.1	1.95459
$n_{F'}$	480.0	1.95739
n_g	435.8	1.98285
n_h	404.7	
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.02459760
B_2	0.470187196
B_3	2.599704330
C_1	0.01470532250
C_2	0.0692998276
C_3	161.8176010

Constants of Formula for dn/dT	
D_0	-4.30E-06
D_1	1.15E-08
D_2	4.31E-11
E_0	9.62E-07
E_1	1.62E-09
λ_{TK} [μm]	0.322

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.4	1.9	5.8	-2.9	-0.7	3.1
+20/+40	-0.5	2.4	7.3	-2.1	0.8	5.5
+60/+80	0.1	3.4	8.9	-1.2	2.1	7.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.790	0.560
2325	0.840	0.640
1970	0.950	0.870
1530	0.989	0.973
1060	0.996	0.991
700	0.991	0.977
660	0.987	0.968
620	0.983	0.958
580	0.976	0.940
546	0.963	0.910
500	0.930	0.830
460	0.890	0.740
436	0.830	0.630
420	0.760	0.500
405	0.590	0.270
400	0.500	0.180
390	0.250	0.020
380	0.040	
370	0.000	
365	0.000	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	45/38*

(*= $\lambda_{70}/\lambda_{50}$)

Remarks

Relative Partial Dispersion	
$P_{s,t}$	0.1980
$P_{C,s}$	0.4467
$P_{d,C}$	0.2822
$P_{e,d}$	0.2345
$P_{g,F}$	0.6394
$P_{t,h}$	
$P'_{s,t}$	0.1941
$P'_{C',s}$	0.4808
$P'_{d,C'}$	0.2339
$P'_{e,d}$	0.2299
$P'_{g,F'}$	0.5647
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0007
$\Delta P_{C,s}$	-0.0048
$\Delta P_{F,e}$	0.0059
$\Delta P_{g,F}$	0.0307
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	5.9
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.8
T_g [°C]	710
T_{10}^{13} [°C]	719
$T_{10}^{7.6}$ [°C]	800
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.800
ρ [g/cm ³]	4.00
E [10^3 N/mm ²]	95
μ	0.259
K [10^{-6} mm ² /N]	2.86
$HK_{0.1/20}$	440
HG	3
CR	1
FR	0
SR	1
AR	1
PR	1

P-SF8
689313.290 $n_d = 1.68893$ $v_d = 31.25$ $n_F - n_C = 0.022046$ $n_e = 1.69414$ $v_e = 31.01$ $n_F' - n_C' = 0.022386$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.64480
$n_{1970.1}$	1970.1	1.65079
$n_{1529.6}$	1529.6	1.65760
$n_{1060.0}$	1060.0	1.66598
n_t	1014.0	1.66708
n_s	852.1	1.67200
n_f	706.5	1.67901
n_C	656.3	1.68252
$n_{C'}$	643.8	1.68353
$n_{632.8}$	632.8	1.68447
n_D	589.3	1.68874
n_d	587.6	1.68893
n_e	546.1	1.69414
n_F	486.1	1.70457
$n_{F'}$	480.0	1.70591
n_g	435.8	1.71778
n_h	404.7	1.72950
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.55370411
B_2	0.206332561
B_3	1.397088310
C_1	0.01165826700
C_2	0.0582087757
C_3	130.7480280

Constants of Formula for dn/dT	
D_0	-4.27E-06
D_1	8.16E-09
D_2	-2.00E-11
E_0	9.02E-07
E_1	1.22E-09
λ_{TK} [μm]	0.272

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	-0.2	1.3	3.2	-2.4	-1.0	0.8
+20/+40	-0.3	1.5	3.7	-1.7	0.0	2.2
+60/+80	-0.3	1.7	4.1	-1.4	0.5	3.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.450
2325	0.800	0.570
1970	0.940	0.850
1530	0.991	0.977
1060	0.999	0.997
700	0.995	0.988
660	0.994	0.984
620	0.994	0.984
580	0.995	0.987
546	0.994	0.986
500	0.989	0.972
460	0.980	0.950
436	0.971	0.930
420	0.959	0.900
405	0.940	0.850
400	0.920	0.820
390	0.870	0.710
380	0.750	0.480
370	0.470	0.150
365	0.260	0.040
350	0.000	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2229
$P_{C,s}$	0.4776
$P_{d,C}$	0.2905
$P_{e,d}$	0.2362
$P_{g,F}$	0.5991
$P_{t,h}$	
$P'_{s,t}$	0.2195
$P'_{C',s}$	0.5150
$P'_{d,C'}$	0.2414
$P'_{e,d}$	0.2326
$P'_{g,F'}$	0.5301
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0072
$\Delta P_{C,s}$	0.0018
$\Delta P_{F,e}$	0.0013
$\Delta P_{g,F}$	0.0079
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	11.1
T_g [°C]	524
T_{10}^{13} [°C]	531
$T_{10}^{7.6}$ [°C]	629
c_p [J/(g·K)]	0.790
λ [W/(m·K)]	1.020
AT [°C]	580
ρ [g/cm ³]	2.90
E [10^3 N/mm ²]	86
μ	0.253
K [10^{-6} mm ² /N]	2.73
HK _{0.1/20}	533
Abrasion Aa	200
CR	1
FR	0
SR	1
AR	1.2
PR	1
SR-J	1
WR-J	1

P-SF68
005210.619

 $n_d = 2.00520$ $v_d = 21.00$ $n_F - n_C = 0.047867$ $n_e = 2.01643$ $v_e = 20.82$ $n_{F'} - n_{C'} = 0.048826$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.93381
$n_{1970.1}$	1970.1	1.93968
$n_{1529.6}$	1529.6	1.94732
$n_{1060.0}$	1060.0	1.95970
n_t	1014.0	1.96160
n_s	852.1	1.97063
n_f	706.5	1.98449
n_C	656.3	1.99171
$n_{C'}$	643.8	1.99380
$n_{632.8}$	632.8	1.99576
n_D	589.3	2.00479
n_d	587.6	2.00520
n_e	546.1	2.01643
n_F	486.1	2.03958
$n_{F'}$	480.0	2.04262
n_g	435.8	2.07018
n_h	404.7	
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	2.33300670
B_2	0.452961396
B_3	1.251723390
C_1	0.01688384190
C_2	0.0716086325
C_3	118.7074790

Constants of Formula for dn/dT	
D_0	1.55E-05
D_1	2.30E-08
D_2	-3.46E-11
E_0	2.76E-06
E_1	2.93E-09
λ_{TK} [μm]	0.297

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	13.7	21.5	32.3	11.1	18.8	29.5
+20/+40	15.2	24.1	36.5	13.5	22.3	34.6
+60/+80	16.2	25.8	39.1	15.4	25.3	39.2

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.790	0.560
2325	0.910	0.780
1970	0.976	0.940
1530	0.996	0.990
1060	0.999	0.998
700	0.997	0.993
660	0.996	0.989
620	0.994	0.985
580	0.989	0.973
546	0.976	0.940
500	0.910	0.780
460	0.760	0.500
436	0.570	0.250
420	0.300	0.050
405	0.040	0.000
400	0.010	
390	0.000	
380		
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	49/41*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.1885
$P_{C,s}$	0.4406
$P_{d,C}$	0.2817
$P_{e,d}$	0.2346
$P_{g,F}$	0.6392
$P_{t,h}$	
$P'_{s,t}$	0.1848
$P'_{C',s}$	0.4746
$P'_{d,C'}$	0.2336
$P'_{e,d}$	0.2300
$P'_{g,F'}$	0.5644
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0156
$\Delta P_{C,s}$	-0.0113
$\Delta P_{F,e}$	0.0063
$\Delta P_{g,F}$	0.0308
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.7
T_g [°C]	428
T_{10}^{13} [°C]	430
$T_{10}^{7.6}$ [°C]	504
c_p [J/(g·K)]	0.370
λ [W/(m·K)]	0.650
AT [°C]	468
ρ [g/cm ³]	6.19
E [10^3 N/mm ²]	79
μ	0.275
K [10^{-6} mm ² /N]	1.61
$HK_{0.1/20}$	404
Abrasion Aa	298
CR	1
FR	5
SR	53.3
AR	1-2.3
PR	2.3
WR-J	1

P-SF69
723292.293 $n_d = 1.72250$ $v_d = 29.23$ $n_F - n_C = 0.024718$ $n_e = 1.72833$ $v_e = 29.00$ $n_F' - n_C' = 0.025116$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67440
$n_{1970.1}$	1970.1	1.68073
$n_{1529.6}$	1529.6	1.68797
$n_{1060.0}$	1060.0	1.69705
n_t	1014.0	1.69826
n_s	852.1	1.70367
n_f	706.5	1.71144
n_C	656.3	1.71535
$n_{C'}$	643.8	1.71647
$n_{632.8}$	632.8	1.71752
n_D	589.3	1.72229
n_d	587.6	1.72250
n_e	546.1	1.72833
n_F	486.1	1.74007
$n_{F'}$	480.0	1.74158
n_g	435.8	1.75502
n_h	404.7	1.76840
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.62594647
B_2	0.235927609
B_3	1.674346230
C_1	0.01216966770
C_2	0.0600710405
C_3	145.6519080

Constants of Formula for dn/dT	
D_0	-2.55E-06
D_1	5.68E-09
D_2	-2.85E-11
E_0	9.50E-07
E_1	1.54E-09
λ_{TK} [μm]	0.275

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	0.9	2.5	4.6	-1.4	0.1	2.1
+20/+40	0.6	2.6	5.2	-0.8	1.1	3.6
+60/+80	0.5	2.8	5.6	-0.6	1.6	4.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.800	0.580
2325	0.860	0.680
1970	0.954	0.890
1530	0.993	0.983
1060	0.999	0.998
700	0.998	0.994
660	0.997	0.993
620	0.997	0.993
580	0.998	0.994
546	0.997	0.992
500	0.993	0.983
460	0.985	0.964
436	0.976	0.940
420	0.963	0.910
405	0.930	0.840
400	0.920	0.800
390	0.850	0.660
380	0.690	0.390
370	0.360	0.080
365	0.160	0.010
350	0.000	0.000
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.2188
$P_{C,s}$	0.4727
$P_{d,C}$	0.2893
$P_{e,d}$	0.2360
$P_{g,F}$	0.6050
$P_{t,h}$	
$P'_{s,t}$	0.2153
$P'_{C',s}$	0.5096
$P'_{d,C'}$	0.2403
$P'_{e,d}$	0.2322
$P'_{g,F'}$	0.5352
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0078
$\Delta P_{C,s}$	0.0016
$\Delta P_{F,e}$	0.0017
$\Delta P_{g,F}$	0.0104
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	9.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	11.1
T_g [°C]	508
T_{10}^{13} [°C]	508
$T_{10}^{7.6}$ [°C]	602
c_p [J/(g·K)]	0.820
λ [W/(m·K)]	1.120
AT [°C]	547
ρ [g/cm ³]	2.93
E [10^3 N/mm ²]	96
μ	0.251
K [10^{-6} mm ² /N]	2.66
HK _{0.1/20}	612
Abrasion Aa	142
CR	1
FR	0
SR	1
AR	1
PR	1
WR-J	1

SF1
717295.446 $n_d = 1.71736$ $v_d = 29.51$ $n_F - n_C = 0.024307$ $n_e = 1.72310$ $v_e = 29.29$ $n_{F'} - n_{C'} = 0.024687$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67352
$n_{1970.1}$	1970.1	1.67855
$n_{1529.6}$	1529.6	1.68449
$n_{1060.0}$	1060.0	1.69258
n_t	1014.0	1.69371
n_s	852.1	1.69888
n_f	706.5	1.70647
n_C	656.3	1.71031
$n_{C'}$	643.8	1.71141
$n_{632.8}$	632.8	1.71245
n_D	589.3	1.71715
n_d	587.6	1.71736
n_e	546.1	1.72310
n_F	486.1	1.73462
$n_{F'}$	480.0	1.73610
n_g	435.8	1.74916
n_h	404.7	1.76201
n_i	365.0	1.78580
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.55912923
B_2	0.284246288
B_3	0.968842926
C_1	0.01214810010
C_2	0.0534549042
C_3	112.1748090

Constants of Formula for dn/dT	
D_0	4.84E-06
D_1	1.70E-08
D_2	-4.52E-11
E_0	1.38E-06
E_1	1.26E-09
λ_{TK} [μm]	0.259

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.5	7.0	10.1	2.2	4.7	7.7
+20/+40	5.0	7.9	11.3	3.6	6.4	9.8
+60/+80	5.3	8.4	12.1	4.2	7.3	10.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.840	0.650
2325	0.880	0.730
1970	0.959	0.900
1530	0.994	0.985
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.997	0.993
460	0.994	0.984
436	0.990	0.976
420	0.984	0.961
405	0.971	0.930
400	0.967	0.920
390	0.950	0.870
380	0.910	0.790
370	0.840	0.640
365	0.760	0.500
350	0.300	0.030
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/34
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2127
$P_{C,s}$	0.4705
$P_{d,C}$	0.2899
$P_{e,d}$	0.2364
$P_{g,F}$	0.5983
$P_{t,h}$	0.9791
$P'_{s,t}$	0.2094
$P'_{C',s}$	0.5078
$P'_{d,C'}$	0.2409
$P'_{e,d}$	0.2327
$P'_{g,F'}$	0.5292
$P'_{i,h}$	0.9640

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0018
$\Delta P_{C,s}$	-0.0012
$\Delta P_{F,e}$	0.0009
$\Delta P_{g,F}$	0.0042
$\Delta P_{i,g}$	0.0307

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.8
T_g [°C]	417
T_{10}^{13} [°C]	415
$T_{10}^{7.6}$ [°C]	566
c_p [J/(g·K)]	0.430
λ [W/(m·K)]	0.660
ρ [g/cm ³]	4.46
E [10^3 N/mm ²]	56
μ	0.232
K [10^{-6} mm ² /N]	1.80
$HK_{0.1/20}$	390
HG	1
CR	2
FR	1
SR	3.2
AR	2.3
PR	3

SF2
648339.386 $n_d = 1.64769$ $v_d = 33.85$ $n_F - n_C = 0.019135$ $n_e = 1.65222$ $v_e = 33.60$ $n_{F'} - n_{C'} = 0.019412$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.61003
$n_{1970.1}$	1970.1	1.61494
$n_{1529.6}$	1529.6	1.62055
$n_{1060.0}$	1060.0	1.62766
n_t	1014.0	1.62861
n_s	852.1	1.63289
n_f	706.5	1.63902
n_C	656.3	1.64210
$n_{C'}$	643.8	1.64297
$n_{632.8}$	632.8	1.64379
n_D	589.3	1.64752
n_d	587.6	1.64769
n_e	546.1	1.65222
n_F	486.1	1.66123
$n_{F'}$	480.0	1.66238
n_g	435.8	1.67249
n_h	404.7	1.68233
n_i	365.0	1.70027
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.40301821
B_2	0.231767504
B_3	0.939056586
C_1	0.01057954660
C_2	0.0493226978
C_3	112.4059550

Constants of Formula for dn/dT	
D_0	1.10E-06
D_1	1.75E-08
D_2	-1.29E-11
E_0	1.08E-06
E_1	1.03E-09
λ_{TK} [μm]	0.249

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.3	4.0	6.0	0.1	1.8	3.7
+20/+40	2.7	4.6	6.9	1.3	3.2	5.4
+60/+80	3.1	5.2	7.6	2.0	4.1	6.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.830	0.620
2325	0.870	0.710
1970	0.950	0.880
1530	0.994	0.985
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.994
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.993
460	0.995	0.988
436	0.993	0.982
420	0.990	0.975
405	0.985	0.962
400	0.981	0.954
390	0.967	0.920
380	0.950	0.870
370	0.910	0.790
365	0.880	0.720
350	0.670	0.370
334	0.110	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	37/33
(*= λ_{70}/λ_5)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2233
$P_{C,s}$	0.4813
$P_{d,C}$	0.2923
$P_{e,d}$	0.2367
$P_{g,F}$	0.5886
$P_{t,h}$	0.9376
$P'_{s,t}$	0.2201
$P'_{C',s}$	0.5196
$P'_{d,C'}$	0.2430
$P'_{e,d}$	0.2334
$P'_{g,F'}$	0.5209
$P'_{i,h}$	0.9242

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0009
$\Delta P_{C,s}$	-0.0005
$\Delta P_{F,e}$	0.0004
$\Delta P_{g,F}$	0.0017
$\Delta P_{i,g}$	0.0112

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	441
T_{10}^{13} [°C]	428
$T_{10}^{7.6}$ [°C]	600
c_p [J/(g·K)]	0.498
λ [W/(m·K)]	0.735
ρ [g/cm ³]	3.86
E [10^3 N/mm ²]	55
μ	0.227
K [10^{-6} mm ² /N]	2.62
$HK_{0.1/20}$	410
HG	2
CR	1
FR	0
SR	2
AR	2.3
PR	2

SF4
755276.479 $n_d = 1.75520$ $v_d = 27.58$ $n_F - n_C = 0.027383$ $n_e = 1.76167$ $v_e = 27.37$ $n_F' - n_C' = 0.027829$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.70789
$n_{1970.1}$	1970.1	1.71294
$n_{1529.6}$	1529.6	1.71904
$n_{1060.0}$	1060.0	1.72765
n_t	1014.0	1.72888
n_s	852.1	1.73456
n_f	706.5	1.74300
n_C	656.3	1.74730
$n_{C'}$	643.8	1.74853
$n_{632.8}$	632.8	1.74969
n_D	589.3	1.75496
n_d	587.6	1.75520
n_e	546.1	1.76167
n_F	486.1	1.77468
$n_{F'}$	480.0	1.77636
n_g	435.8	1.79121
n_h	404.7	1.80589
n_i	365.0	1.83330
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.61957826
B_2	0.339493189
B_3	1.025669310
C_1	0.01255021040
C_2	0.0544559822
C_3	117.6522220

Constants of Formula for dn/dT	
D_0	5.60E-06
D_1	1.70E-08
D_2	-5.27E-11
E_0	1.54E-06
E_1	1.46E-09
λ_{TK} [μm]	0.266

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	5.1	8.1	11.8	2.8	5.7	9.4
+20/+40	5.7	9.2	13.3	4.3	7.7	11.8
+60/+80	6.0	9.7	14.2	4.9	8.5	13.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.850	0.660
2325	0.890	0.740
1970	0.963	0.910
1530	0.996	0.989
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.996	0.991
460	0.992	0.980
436	0.987	0.967
420	0.980	0.950
405	0.963	0.910
400	0.954	0.890
390	0.920	0.820
380	0.860	0.690
370	0.730	0.450
365	0.600	0.280
350	0.090	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	40/35
(*= λ_{70}/λ_5)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2076
$P_{C,s}$	0.4650
$P_{d,C}$	0.2886
$P_{e,d}$	0.2361
$P_{g,F}$	0.6036
$P_{t,h}$	1.0012
$P'_{s,t}$	0.2042
$P'_{C',s}$	0.5018
$P'_{d,C'}$	0.2398
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5337
$P'_{i,h}$	0.9851

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0032
$\Delta P_{C,s}$	-0.0022
$\Delta P_{F,e}$	0.0014
$\Delta P_{g,F}$	0.0062
$\Delta P_{i,g}$	0.0443

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.0
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.9
T_g [°C]	420
T_{10}^{13} [°C]	415
$T_{10}^{7.6}$ [°C]	552
c_p [J/(g·K)]	0.410
λ [W/(m·K)]	0.650
ρ [g/cm ³]	4.79
E [10^3 N/mm ²]	56
μ	0.241
K [10^{-6} mm ² /N]	1.36
$HK_{0.1/20}$	390
HG	1
CR	1
FR	2
SR	4.3
AR	2.3
PR	3.3

SF5
673322.407 $n_d = 1.67270$ $v_d = 32.21$ $n_F - n_C = 0.020885$ $n_e = 1.67764$ $v_e = 31.97$ $n_F' - n_C' = 0.021195$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.63289
$n_{1970.1}$	1970.1	1.63785
$n_{1529.6}$	1529.6	1.64359
$n_{1060.0}$	1060.0	1.65104
n_t	1014.0	1.65206
n_s	852.1	1.65664
n_f	706.5	1.66327
n_C	656.3	1.66661
$n_{C'}$	643.8	1.66756
$n_{632.8}$	632.8	1.66846
n_D	589.3	1.67252
n_d	587.6	1.67270
n_e	546.1	1.67764
n_F	486.1	1.68750
$n_{F'}$	480.0	1.68876
n_g	435.8	1.69986
n_h	404.7	1.71069
n_i	365.0	1.73056
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.46141885
B_2	0.247713019
B_3	0.949995832
C_1	0.01118261260
C_2	0.0508594669
C_3	112.0418880

Constants of Formula for dn/dT	
D_0	2.59E-06
D_1	1.76E-08
D_2	-2.03E-11
E_0	1.17E-06
E_1	1.09E-09
λ_{TK} [μm]	0.255

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.1	5.1	7.4	0.9	2.8	5.1
+20/+40	3.5	5.8	8.4	2.1	4.4	6.9
+60/+80	3.9	6.4	9.2	2.8	5.2	8.0

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.850	0.660
2325	0.890	0.740
1970	0.959	0.900
1530	0.995	0.987
1060	0.998	0.996
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.997	0.993
460	0.995	0.988
436	0.993	0.982
420	0.989	0.973
405	0.983	0.959
400	0.980	0.950
390	0.967	0.920
380	0.950	0.880
370	0.910	0.800
365	0.880	0.730
350	0.630	0.310
334	0.200	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	37/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2194
$P_{C,s}$	0.4775
$P_{d,C}$	0.2915
$P_{e,d}$	0.2366
$P_{g,F}$	0.5919
$P_{t,h}$	0.9513
$P'_{s,t}$	0.2162
$P'_{C',s}$	0.5153
$P'_{d,C'}$	0.2423
$P'_{e,d}$	0.2331
$P'_{g,F'}$	0.5237
$P'_{i,h}$	0.9374

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0010
$\Delta P_{C,s}$	-0.0005
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	0.0023
$\Delta P_{i,g}$	0.0160

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.2
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.0
T_g [°C]	425
T_{10}^{13} [°C]	421
$T_{10}^{7.6}$ [°C]	580
c_p [J/(g·K)]	0.470
λ [W/(m·K)]	0.690
ρ [g/cm ³]	4.07
E [10^3 N/mm ²]	56
μ	0.233
K [10^{-6} mm ² /N]	2.28
$HK_{0.1/20}$	410
HG	2
CR	1
FR	1
SR	2
AR	2.3
PR	3

SF6
805254.518 $n_d = 1.80518$ $v_d = 25.43$ $n_F - n_C = 0.031660$ $n_e = 1.81265$ $v_e = 25.24$ $n_F' - n_C' = 0.032201$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.75302
$n_{1970.1}$	1970.1	1.75813
$n_{1529.6}$	1529.6	1.76444
$n_{1060.0}$	1060.0	1.77380
n_t	1014.0	1.77517
n_s	852.1	1.78157
n_f	706.5	1.79117
n_C	656.3	1.79609
$n_{C'}$	643.8	1.79750
$n_{632.8}$	632.8	1.79884
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81265
n_F	486.1	1.82775
$n_{F'}$	480.0	1.82970
n_g	435.8	1.84707
n_h	404.7	1.86436
n_i	365.0	1.89703
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.72448482
B_2	0.390104889
B_3	1.045728580
C_1	0.01348719470
C_2	0.0569318095
C_3	118.5571850

Constants of Formula for dn/dT	
D_0	6.69E-06
D_1	1.78E-08
D_2	-3.36E-11
E_0	1.77E-06
E_1	1.70E-09
λ_{TK} [μm]	0.269

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.1	9.9	14.5	3.7	7.4	11.9
+20/+40	6.8	11.1	16.2	5.3	9.5	14.6
+60/+80	7.3	11.8	17.4	6.1	10.6	16.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.890	0.740
2325	0.910	0.790
1970	0.971	0.930
1530	0.996	0.991
1060	0.999	0.999
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.999	0.996
546	0.998	0.996
500	0.996	0.991
460	0.991	0.978
436	0.982	0.955
420	0.967	0.920
405	0.930	0.840
400	0.920	0.800
390	0.850	0.660
380	0.720	0.440
370	0.440	0.130
365	0.250	0.030
350	0.000	0.000
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/36
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2020
$P_{C,s}$	0.4588
$P_{d,C}$	0.2871
$P_{e,d}$	0.2359
$P_{g,F}$	0.6102
$P_{t,h}$	1.0316
$P'_{s,t}$	0.1986
$P'_{C',s}$	0.4950
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5393
$P'_{i,h}$	1.0143

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0048
$\Delta P_{C,s}$	-0.0033
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0092
$\Delta P_{i,g}$	0.0669

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.0
T_g [°C]	423
T_{10}^{13} [°C]	410
$T_{10}^{7.6}$ [°C]	538
c_p [J/(g·K)]	0.389
λ [W/(m·K)]	0.673
ρ [g/cm ³]	5.18
E [10^3 N/mm ²]	55
μ	0.244
K [10^{-6} mm ² /N]	0.65
$HK_{0.1/20}$	370
HG	1
CR	2
FR	3
SR	51.3
AR	2.3
PR	3.3

SF6HT
805254.518 $n_d = 1.80518$ $v_d = 25.43$ $n_F - n_C = 0.031660$ $n_e = 1.81265$ $v_e = 25.24$ $n_{F'} - n_{C'} = 0.032201$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.75302
$n_{1970.1}$	1970.1	1.75813
$n_{1529.6}$	1529.6	1.76444
$n_{1060.0}$	1060.0	1.77380
n_t	1014.0	1.77517
n_s	852.1	1.78157
n_f	706.5	1.79117
n_C	656.3	1.79609
$n_{C'}$	643.8	1.79750
$n_{632.8}$	632.8	1.79884
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81265
n_F	486.1	1.82775
$n_{F'}$	480.0	1.82970
n_g	435.8	1.84707
n_h	404.7	1.86436
n_i	365.0	1.89703
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.72448482
B_2	0.390104889
B_3	1.045728580
C_1	0.01348719470
C_2	0.0569318095
C_3	118.5571850

Constants of Formula for dn/dT	
D_0	6.69E-06
D_1	1.78E-08
D_2	-3.36E-11
E_0	1.77E-06
E_1	1.70E-09
λ_{TK} [μm]	0.269

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.1	9.9	14.5	3.7	7.4	11.9
+20/+40	6.8	11.1	16.2	5.3	9.5	14.6
+60/+80	7.3	11.8	17.4	6.1	10.6	16.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.890	0.740
2325	0.910	0.790
1970	0.971	0.930
1530	0.996	0.991
1060	0.999	0.999
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.999	0.996
546	0.998	0.996
500	0.996	0.991
460	0.992	0.981
436	0.987	0.967
420	0.977	0.940
405	0.954	0.890
400	0.940	0.860
390	0.890	0.750
380	0.770	0.520
370	0.500	0.180
365	0.300	0.050
350	0.000	0.000
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	41/36
(*= λ_{70}/λ_5)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2020
$P_{C,s}$	0.4588
$P_{d,C}$	0.2871
$P_{e,d}$	0.2359
$P_{g,F}$	0.6102
$P_{t,h}$	1.0316
$P'_{s,t}$	0.1986
$P'_{C',s}$	0.4950
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5393
$P'_{i,h}$	1.0143

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0048
$\Delta P_{C,s}$	-0.0033
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0092
$\Delta P_{i,g}$	0.0669

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.0
T_g [°C]	423
T_{10}^{13} [°C]	410
$T_{10}^{7.6}$ [°C]	538
c_p [J/(g·K)]	0.389
λ [W/(m·K)]	0.673
ρ [g/cm ³]	5.18
E [10^3 N/mm ²]	55
μ	0.244
K [10^{-6} mm ² /N]	0.65
$HK_{0.1/20}$	370
HG	1
CR	2
FR	3
SR	51.3
AR	2.3
PR	3.3

SF10
728284.428 $n_d = 1.72825$ $v_d = 28.41$ $n_F - n_C = 0.025633$ $n_e = 1.73430$ $v_e = 28.19$ $n_F' - n_C' = 0.026051$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.68218
$n_{1970.1}$	1970.1	1.68750
$n_{1529.6}$	1529.6	1.69378
$n_{1060.0}$	1060.0	1.70227
n_t	1014.0	1.70345
n_s	852.1	1.70887
n_f	706.5	1.71681
n_C	656.3	1.72085
$n_{C'}$	643.8	1.72200
$n_{632.8}$	632.8	1.72309
n_D	589.3	1.72803
n_d	587.6	1.72825
n_e	546.1	1.73430
n_F	486.1	1.74648
$n_{F'}$	480.0	1.74805
n_g	435.8	1.76198
n_h	404.7	1.77579
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.61625977
B_2	0.259229334
B_3	1.077623170
C_1	0.01275345590
C_2	0.0581983954
C_3	116.6076800

Constants of Formula for dn/dT	
D_0	5.31E-06
D_1	1.59E-08
D_2	-4.07E-11
E_0	1.28E-06
E_1	1.32E-09
λ_{TK} [μm]	0.270

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.8	7.3	10.3	2.5	4.9	7.9
+20/+40	5.3	8.1	11.6	3.8	6.6	10.0
+60/+80	5.6	8.6	12.4	4.4	7.4	11.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.860	0.690
2325	0.900	0.760
1970	0.967	0.920
1530	0.995	0.987
1060	0.999	0.997
700	0.998	0.995
660	0.997	0.993
620	0.997	0.993
580	0.998	0.995
546	0.998	0.995
500	0.996	0.989
460	0.991	0.978
436	0.984	0.961
420	0.967	0.920
405	0.910	0.790
400	0.860	0.690
390	0.670	0.370
380	0.360	0.060
370	0.080	
365	0.020	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	41/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2111
$P_{C,s}$	0.4674
$P_{d,C}$	0.2888
$P_{e,d}$	0.2361
$P_{g,F}$	0.6046
$P_{t,h}$	
$P'_{s,t}$	0.2077
$P'_{C',s}$	0.5042
$P'_{d,C'}$	0.2399
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5346
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0012
$\Delta P_{C,s}$	-0.0017
$\Delta P_{F,e}$	0.0017
$\Delta P_{g,F}$	0.0085
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.5
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.4
T_g [°C]	454
T_{10}^{13} [°C]	445
$T_{10}^{7.6}$ [°C]	595
c_p [J/(g·K)]	0.465
λ [W/(m·K)]	0.741
ρ [g/cm ³]	4.28
E [10^3 N/mm ²]	64
μ	0.232
K [10^{-6} mm ² /N]	1.95
$HK_{0.1/20}$	430
HG	1
CR	1
FR	0
SR	1
AR	1.2
PR	2

SF11
785258.474 $n_d = 1.78472$ $v_d = 25.76$ $n_F - n_C = 0.030467$ $n_e = 1.79190$ $v_e = 25.55$ $n_F' - n_C' = 0.030997$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.73294
$n_{1970.1}$	1970.1	1.73843
$n_{1529.6}$	1529.6	1.74506
$n_{1060.0}$	1060.0	1.75445
n_t	1014.0	1.75579
n_s	852.1	1.76200
n_f	706.5	1.77125
n_C	656.3	1.77599
$n_{C'}$	643.8	1.77734
$n_{632.8}$	632.8	1.77862
n_D	589.3	1.78446
n_d	587.6	1.78472
n_e	546.1	1.79190
n_F	486.1	1.80645
$n_{F'}$	480.0	1.80834
n_g	435.8	1.82518
n_h	404.7	1.84208
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.73848403
B_2	0.311168974
B_3	1.174908710
C_1	0.01360686040
C_2	0.0615960463
C_3	121.9227110

Constants of Formula for dn/dT	
D_0	1.12E-05
D_1	1.81E-08
D_2	-5.03E-11
E_0	1.46E-06
E_1	1.58E-09
λ_{TK} [μm]	0.282

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	8.4	11.7	15.8	6.1	9.2	13.3
+20/+40	9.2	12.9	17.6	7.7	11.3	16.0
+60/+80	9.6	13.6	18.7	8.4	12.4	17.4

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.820	0.610
2325	0.870	0.700
1970	0.971	0.930
1530	0.993	0.982
1060	0.999	0.997
700	0.997	0.993
660	0.996	0.991
620	0.996	0.991
580	0.996	0.991
546	0.996	0.989
500	0.990	0.976
460	0.976	0.940
436	0.940	0.860
420	0.870	0.700
405	0.650	0.340
400	0.530	0.200
390	0.180	0.010
380		
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	44/39
(*= λ_{70}/λ_5)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2039
$P_{C,s}$	0.4590
$P_{d,C}$	0.2866
$P_{e,d}$	0.2356
$P_{g,F}$	0.6147
$P_{t,h}$	
$P'_{s,t}$	0.2004
$P'_{C',s}$	0.4949
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2316
$P'_{g,F'}$	0.5433
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0043
$\Delta P_{C,s}$	-0.0040
$\Delta P_{F,e}$	0.0029
$\Delta P_{g,F}$	0.0142
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.1
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	6.8
T_g [°C]	503
T_{10}^{13} [°C]	500
$T_{10}^{7.6}$ [°C]	635
c_p [J/(g·K)]	0.431
λ [W/(m·K)]	0.737
ρ [g/cm ³]	4.74
E [10^3 N/mm ²]	66
μ	0.235
K [10^{-6} mm ² /N]	1.33
$HK_{0.1/20}$	450
HG	1
CR	1
FR	0
SR	1
AR	1.2
PR	1

SF56A
785261.492 $n_d = 1.78470$ $v_d = 26.08$ $n_F - n_C = 0.030092$ $n_e = 1.79180$ $v_e = 25.87$ $n_F' - n_C' = 0.030603$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.73406
$n_{1970.1}$	1970.1	1.73925
$n_{1529.6}$	1529.6	1.74559
$n_{1060.0}$	1060.0	1.75473
n_t	1014.0	1.75606
n_s	852.1	1.76220
n_f	706.5	1.77136
n_C	656.3	1.77605
$n_{C'}$	643.8	1.77740
$n_{632.8}$	632.8	1.77866
n_D	589.3	1.78444
n_d	587.6	1.78470
n_e	546.1	1.79180
n_F	486.1	1.80615
$n_{F'}$	480.0	1.80800
n_g	435.8	1.82449
n_h	404.7	1.84092
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.70579259
B_2	0.344223052
B_3	1.096018280
C_1	0.01338746990
C_2	0.0579561608
C_3	121.6160240

Constants of Formula for dn/dT	
D_0	6.02E-06
D_1	1.70E-08
D_2	-2.61E-11
E_0	1.63E-06
E_1	1.59E-09
λ_{TK} [μm]	0.269

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	5.6	9.0	13.1	3.3	6.6	10.6
+20/+40	6.2	10.0	14.7	4.7	8.5	13.1
+60/+80	6.6	10.7	15.8	5.5	9.5	14.5

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.870	0.700
2325	0.900	0.760
1970	0.967	0.920
1530	0.996	0.989
1060	0.999	0.997
700	0.998	0.995
660	0.997	0.993
620	0.998	0.994
580	0.998	0.994
546	0.998	0.994
500	0.996	0.989
460	0.990	0.974
436	0.980	0.950
420	0.959	0.900
405	0.900	0.760
400	0.860	0.680
390	0.700	0.410
380	0.400	0.100
370	0.120	0.010
365	0.040	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	42/37
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type	

Relative Partial Dispersion	
$P_{s,t}$	0.2040
$P_{C,s}$	0.4605
$P_{d,C}$	0.2874
$P_{e,d}$	0.2359
$P_{g,F}$	0.6098
$P_{t,h}$	
$P'_{s,t}$	0.2006
$P'_{C',s}$	0.4967
$P'_{d,C'}$	0.2387
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5390
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0042
$\Delta P_{C,s}$	-0.0032
$\Delta P_{F,e}$	0.0021
$\Delta P_{g,F}$	0.0098
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.9
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.8
T_g [°C]	429
T_{10}^{13} [°C]	426
$T_{10}^{7.6}$ [°C]	556
c_p [J/(g·K)]	0.400
λ [W/(m·K)]	0.690
ρ [g/cm ³]	4.92
E [10^3 N/mm ²]	57
μ	0.239
K [10^{-6} mm ² /N]	1.10
$HK_{0.1/20}$	380
HG	1
CR	1
FR	1
SR	3.2
AR	2.2
PR	3.2

SF57
847238.551 $n_d = 1.84666$ $v_d = 23.83$ $n_F - n_C = 0.035536$ $n_e = 1.85504$ $v_e = 23.64$ $n_F' - n_C' = 0.036166$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.79026
$n_{1970.1}$	1970.1	1.79539
$n_{1529.6}$	1529.6	1.80187
$n_{1060.0}$	1060.0	1.81185
n_t	1014.0	1.81335
n_s	852.1	1.82038
n_f	706.5	1.83102
n_C	656.3	1.83650
$n_{C'}$	643.8	1.83808
$n_{632.8}$	632.8	1.83957
n_D	589.3	1.84636
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87204
$n_{F'}$	480.0	1.87425
n_g	435.8	1.89393
n_h	404.7	1.91366
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.81651371
B_2	0.428893641
B_3	1.071862780
C_1	0.01437041980
C_2	0.0592801172
C_3	121.4199420

Constants of Formula for dn/dT	
D_0	7.26E-06
D_1	1.88E-08
D_2	-5.14E-11
E_0	1.96E-06
E_1	1.79E-09
λ_{TK} [μm]	0.276

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.6	11.1	16.7	4.2	8.6	14.1
+20/+40	7.6	12.5	18.9	6.0	10.9	17.2
+60/+80	8.0	13.4	20.1	6.8	12.1	18.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.890	0.750
2325	0.910	0.790
1970	0.971	0.930
1530	0.996	0.991
1060	0.999	0.997
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.994
546	0.998	0.994
500	0.994	0.986
460	0.987	0.968
436	0.971	0.930
420	0.940	0.860
405	0.880	0.730
400	0.850	0.660
390	0.730	0.450
380	0.520	0.200
370	0.160	0.010
365	0.040	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	40/37*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type suitable for precision molding	

Relative Partial Dispersion	
$P_{s,t}$	0.1976
$P_{C,s}$	0.4539
$P_{d,C}$	0.2859
$P_{e,d}$	0.2356
$P_{g,F}$	0.6160
$P_{t,h}$	
$P'_{s,t}$	0.1942
$P'_{C',s}$	0.4895
$P'_{d,C'}$	0.2373
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0065
$\Delta P_{C,s}$	-0.0046
$\Delta P_{F,e}$	0.0026
$\Delta P_{g,F}$	0.0123
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	414
T_{10}^{13} [°C]	414
$T_{10}^{7.6}$ [°C]	507
c_p [J/(g·K)]	0.360
λ [W/(m·K)]	0.620
AT [°C]	449
ρ [g/cm ³]	5.51
E [10^3 N/mm ²]	54
μ	0.248
K [10^{-6} mm ² /N]	0.02
HK _{0.1/20}	350
HG	1
Abrasion Aa	344
CR	2
FR	5
SR	52.3
AR	2.3
PR	4.3
SR-J	6
WR-J	1

SF57HTultra
847238.551 $n_d = 1.84666$ $v_d = 23.83$ $n_F - n_C = 0.035536$ $n_e = 1.85504$ $v_e = 23.64$ $n_F' - n_C' = 0.036166$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.79026
$n_{1970.1}$	1970.1	1.79539
$n_{1529.6}$	1529.6	1.80187
$n_{1060.0}$	1060.0	1.81185
n_t	1014.0	1.81335
n_s	852.1	1.82038
n_f	706.5	1.83102
n_C	656.3	1.83650
$n_{C'}$	643.8	1.83808
$n_{632.8}$	632.8	1.83957
n_D	589.3	1.84636
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87204
$n_{F'}$	480.0	1.87425
n_g	435.8	1.89393
n_h	404.7	1.91366
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.81651371
B_2	0.428893641
B_3	1.071862780
C_1	0.01437041980
C_2	0.0592801172
C_3	121.4199420

Constants of Formula for dn/dT	
D_0	7.26E-06
D_1	1.88E-08
D_2	-5.14E-11
E_0	1.96E-06
E_1	1.79E-09
λ_{TK} [μm]	0.276

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	6.6	11.1	16.7	4.2	8.6	14.1
+20/+40	7.6	12.5	18.9	6.0	10.9	17.2
+60/+80	8.0	13.4	20.1	6.8	12.1	18.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.910	0.800
2325	0.930	0.840
1970	0.980	0.951
1530	0.998	0.994
1060	0.999	0.999
700	0.999	0.998
660	0.999	0.997
620	0.999	0.997
580	0.999	0.997
546	0.999	0.997
500	0.996	0.990
460	0.991	0.978
436	0.985	0.962
420	0.971	0.930
405	0.940	0.860
400	0.920	0.820
390	0.830	0.630
380	0.620	0.300
370	0.250	0.030
365	0.100	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	39/36*
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
lead containing glass type, suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.1976
$P_{C,s}$	0.4539
$P_{d,C}$	0.2859
$P_{e,d}$	0.2356
$P_{g,F}$	0.6160
$P_{t,h}$	
$P'_{s,t}$	0.1942
$P'_{C',s}$	0.4895
$P'_{d,C'}$	0.2373
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	-0.0065
$\Delta P_{C,s}$	-0.0046
$\Delta P_{F,e}$	0.0026
$\Delta P_{g,F}$	0.0123
$\Delta P_{i,g}$	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	8.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.2
T_g [°C]	414
T_{10}^{13} [°C]	414
$T_{10}^{7.6}$ [°C]	507
c_p [J/(g·K)]	0.360
λ [W/(m·K)]	0.620
AT [°C]	449
ρ [g/cm ³]	5.51
E [10^3 N/mm ²]	54
μ	0.248
K [10^{-6} mm ² /N]	0.02
HK _{0.1/20}	350
HG	1
Abrasion Aa	344
CR	2
FR	5
SR	52.3
AR	2.3
PR	4.3
SR-J	6
WR-J	1

N-KZFS11
638424.320

 $n_d = 1.63775$ $v_d = 42.41$ $n_F - n_C = 0.015038$ $n_e = 1.64132$ $v_e = 42.20$ $n_F' - n_C' = 0.015198$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.59699
$n_{1970.1}$	1970.1	1.60439
$n_{1529.6}$	1529.6	1.61223
$n_{1060.0}$	1060.0	1.62044
n_t	1014.0	1.62139
n_s	852.1	1.62540
n_f	706.5	1.63069
n_C	656.3	1.63324
$n_{C'}$	643.8	1.63395
$n_{632.8}$	632.8	1.63462
n_D	589.3	1.63762
n_d	587.6	1.63775
n_e	546.1	1.64132
n_F	486.1	1.64828
$n_{F'}$	480.0	1.64915
n_g	435.8	1.65670
n_h	404.7	1.66385
n_i	365.0	1.67636
$n_{334.1}$	334.1	1.69037
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.33222450
B_2	0.289241610
B_3	1.151617340
C_1	0.00840298480
C_2	0.0344239720
C_3	88.4310532

Constants of Formula for dn/dT	
D_0	3.34E-06
D_1	1.16E-08
D_2	-1.80E-11
E_0	6.32E-07
E_1	7.21E-10
λ_{TK} [μm]	0.206

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	3.5	4.4	5.4	1.3	2.2	3.1
+20/+40	3.5	4.6	5.7	2.1	3.1	4.2
+60/+80	3.6	4.8	6.0	2.5	3.7	4.8

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.510	0.180
2325	0.780	0.540
1970	0.965	0.910
1530	0.991	0.977
1060	0.999	0.999
700	0.998	0.994
660	0.997	0.992
620	0.997	0.992
580	0.997	0.992
546	0.997	0.993
500	0.996	0.989
460	0.993	0.982
436	0.991	0.978
420	0.990	0.975
405	0.988	0.971
400	0.987	0.968
390	0.983	0.957
380	0.976	0.940
370	0.963	0.910
365	0.950	0.880
350	0.880	0.730
334	0.730	0.450
320	0.470	0.150
310	0.230	0.020
300	0.050	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2664
$P_{C,s}$	0.5212
$P_{d,C}$	0.3000
$P_{e,d}$	0.2377
$P_{g,F}$	0.5605
$P_{t,h}$	0.8319
$P'_{s,t}$	0.2636
$P'_{C',s}$	0.5627
$P'_{d,C'}$	0.2499
$P'_{e,d}$	0.2352
$P'_{g,F'}$	0.4971
$P'_{i,h}$	0.8232

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0415
$\Delta P_{C,s}$	0.0194
$\Delta P_{F,e}$	-0.0039
$\Delta P_{g,F}$	-0.0120
$\Delta P_{i,g}$	-0.0617

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.6
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.6
T_g [°C]	551
T_{10}^{13} [°C]	554
$T_{10}^{7.6}$ [°C]	
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.810
ρ [g/cm ³]	3.20
E [10^3 N/mm ²]	79
μ	0.251
K [10^{-6} mm ² /N]	4.21
$HK_{0.1/20}$	530
HG	3
Abrasion Aa	74
CR	1
FR	1
SR	3.4
AR	1
PR	1

N-KZFS2
558540.254 $n_d = 1.55836$ $v_d = 54.01$ $n_F - n_C = 0.010338$ $n_e = 1.56082$ $v_e = 53.83$ $n_F' - n_C' = 0.010418$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.52239
$n_{1970.1}$	1970.1	1.53011
$n_{1529.6}$	1529.6	1.53798
$n_{1060.0}$	1060.0	1.54546
n_t	1014.0	1.54625
n_s	852.1	1.54944
n_f	706.5	1.55337
n_C	656.3	1.55519
$n_{C'}$	643.8	1.55570
$n_{632.8}$	632.8	1.55617
n_D	589.3	1.55827
n_d	587.6	1.55836
n_e	546.1	1.56082
n_F	486.1	1.56553
$n_{F'}$	480.0	1.56612
n_g	435.8	1.57114
n_h	404.7	1.57580
n_i	365.0	1.58382
$n_{334.1}$	334.1	1.59259
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.23697554
B_2	0.153569376
B_3	0.903976272
C_1	0.00747170505
C_2	0.0308053556
C_3	70.1731084

Constants of Formula for dn/dT	
D_0	6.77E-06
D_1	1.31E-08
D_2	-1.23E-11
E_0	3.84E-07
E_1	5.51E-10
λ_{TK} [μm]	0.196

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.6	5.2	5.7	2.5	3.0	3.5
+20/+40	4.7	5.3	5.9	3.3	3.9	4.5
+60/+80	4.8	5.5	6.2	3.8	4.5	5.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.280	0.040
2325	0.580	0.260
1970	0.910	0.800
1530	0.976	0.940
1060	0.996	0.991
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.994
546	0.998	0.994
500	0.997	0.992
460	0.995	0.987
436	0.992	0.981
420	0.990	0.975
405	0.987	0.967
400	0.985	0.963
390	0.980	0.950
380	0.971	0.930
370	0.963	0.910
365	0.954	0.890
350	0.910	0.800
334	0.810	0.590
320	0.570	0.240
310	0.250	0.030
300	0.010	
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	34/30
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.3080
$P_{C,s}$	0.5568
$P_{d,C}$	0.3061
$P_{e,d}$	0.2383
$P_{g,F}$	0.5419
$P_{t,h}$	0.7758
$P'_{s,t}$	0.3056
$P'_{C',s}$	0.6011
$P'_{d,C'}$	0.2552
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4814
$P'_{i,h}$	0.7699

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0636
$\Delta P_{C,s}$	0.0280
$\Delta P_{F,e}$	-0.0044
$\Delta P_{g,F}$	-0.0111
$\Delta P_{i,g}$	-0.0440

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	4.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	5.4
T_g [°C]	482
T_{10}^{13} [°C]	488
$T_{10}^{7.6}$ [°C]	590
c_p [J/(g·K)]	0.830
λ [W/(m·K)]	0.810
AT [°C]	533
ρ [g/cm ³]	2.54
E [10^3 N/mm ²]	66
μ	0.266
K [10^{-6} mm ² /N]	4.02
HK _{0.1/20}	490
HG	3
Abrasion Aa	70
CR	1
FR	4
SR	52.3
AR	4.3
PR	4.2
SR-J	6
WR-J	6

N-KZFS4
613445.300

 $n_d = 1.61336$ $v_d = 44.49$ $n_F - n_C = 0.013785$ $n_e = 1.61664$ $v_e = 44.27$ $n_F' - n_C' = 0.013929$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57535
$n_{1970.1}$	1970.1	1.58233
$n_{1529.6}$	1529.6	1.58971
$n_{1060.0}$	1060.0	1.59739
n_t	1014.0	1.59828
n_s	852.1	1.60199
n_f	706.5	1.60688
n_C	656.3	1.60922
$n_{C'}$	643.8	1.60987
$n_{632.8}$	632.8	1.61049
n_D	589.3	1.61324
n_d	587.6	1.61336
n_e	546.1	1.61664
n_F	486.1	1.62300
$n_{F'}$	480.0	1.62380
n_g	435.8	1.63071
n_h	404.7	1.63723
n_i	365.0	1.64865
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.35055424
B_2	0.197575506
B_3	1.099629920
C_1	0.00876282070
C_2	0.0371767201
C_3	90.3866994

Constants of Formula for dn/dT	
D_0	1.81E-06
D_1	1.16E-08
D_2	-7.99E-12
E_0	6.20E-07
E_1	7.94E-10
λ_{TK} [μm]	0.205

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.7	3.5	4.4	0.5	1.3	2.2
+20/+40	2.7	3.7	4.7	1.3	2.3	3.2
+60/+80	2.8	3.9	5.0	1.7	2.8	3.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.510	0.190
2325	0.750	0.490
1970	0.951	0.880
1530	0.984	0.961
1060	0.998	0.996
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.992
500	0.995	0.987
460	0.990	0.976
436	0.987	0.968
420	0.984	0.961
405	0.981	0.952
400	0.979	0.950
390	0.971	0.930
380	0.963	0.910
370	0.940	0.860
365	0.920	0.820
350	0.820	0.600
334	0.470	0.150
320	0.040	
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2694
$P_{C,s}$	0.5240
$P_{d,C}$	0.3006
$P_{e,d}$	0.2378
$P_{g,F}$	0.5590
$P_{t,h}$	0.8284
$P'_{s,t}$	0.2666
$P'_{C',s}$	0.5657
$P'_{d,C'}$	0.2503
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4958
$P'_{i,h}$	0.8199

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0373
$\Delta P_{C,s}$	0.0173
$\Delta P_{F,e}$	-0.0033
$\Delta P_{g,F}$	-0.0100
$\Delta P_{i,g}$	-0.0496

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.2
T_g [°C]	536
T_{10}^{13} [°C]	541
$T_{10}^{7.6}$ [°C]	664
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	0.840
AT [°C]	597
ρ [g/cm ³]	3.00
E [10^3 N/mm ²]	78
μ	0.241
K [10^{-6} mm ² /N]	3.90
HK _{0.1/20}	520
HG	3
Abrasion Aa	130
CR	1
FR	1
SR	3.4
AR	1.2
PR	1
SR-J	6
WR-J	4

N-KZFS4HT
613445.300 $n_d = 1.61336$ $v_d = 44.49$ $n_F - n_C = 0.013785$ $n_e = 1.61664$ $v_e = 44.27$ $n_F' - n_C' = 0.013929$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.57535
$n_{1970.1}$	1970.1	1.58233
$n_{1529.6}$	1529.6	1.58971
$n_{1060.0}$	1060.0	1.59739
n_t	1014.0	1.59828
n_s	852.1	1.60199
n_f	706.5	1.60688
n_C	656.3	1.60922
$n_{C'}$	643.8	1.60987
$n_{632.8}$	632.8	1.61049
n_D	589.3	1.61324
n_d	587.6	1.61336
n_e	546.1	1.61664
n_F	486.1	1.62300
$n_{F'}$	480.0	1.62380
n_g	435.8	1.63071
n_h	404.7	1.63723
n_i	365.0	1.64865
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.35055424
B_2	0.197575506
B_3	1.099629920
C_1	0.00876282070
C_2	0.0371767201
C_3	90.3866994

Constants of Formula for dn/dT	
D_0	1.81E-06
D_1	1.16E-08
D_2	-7.99E-12
E_0	6.20E-07
E_1	7.94E-10
λ_{TK} [μm]	0.205

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.7	3.5	4.4	0.5	1.3	2.2
+20/+40	2.7	3.7	4.7	1.3	2.3	3.2
+60/+80	2.8	3.9	5.0	1.7	2.8	3.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.510	0.190
2325	0.750	0.490
1970	0.951	0.880
1530	0.984	0.961
1060	0.999	0.999
700	0.998	0.994
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.995	0.988
460	0.992	0.980
436	0.990	0.975
420	0.988	0.971
405	0.986	0.966
400	0.985	0.962
390	0.980	0.951
380	0.973	0.930
370	0.959	0.900
365	0.950	0.870
350	0.870	0.700
334	0.550	0.220
320	0.060	0.000
310		
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	36/32
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2694
$P_{C,s}$	0.5240
$P_{d,C}$	0.3006
$P_{e,d}$	0.2378
$P_{g,F}$	0.5590
$P_{t,h}$	0.8284
$P'_{s,t}$	0.2666
$P'_{C',s}$	0.5657
$P'_{d,C'}$	0.2503
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4958
$P'_{i,h}$	0.8199

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0373
$\Delta P_{C,s}$	0.0173
$\Delta P_{F,e}$	-0.0033
$\Delta P_{g,F}$	-0.0100
$\Delta P_{i,g}$	-0.0496

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.3
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	8.2
T_g [°C]	536
T_{10}^{13} [°C]	541
$T_{10}^{7.6}$ [°C]	664
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	0.840
AT [°C]	597
ρ [g/cm ³]	3.00
E [10^3 N/mm ²]	78
μ	0.241
K [10^{-6} mm ² /N]	3.90
HK _{0.1/20}	520
HG	3
Abrasion Aa	130
CR	1
FR	1
SR	3.4
AR	1.2
PR	1
SR-J	6
WR-J	4

N-KZFS5
654397.304 $n_d = 1.65412$ $v_d = 39.70$ $n_F - n_C = 0.016477$ $n_e = 1.65803$ $v_e = 39.46$ $n_F' - n_C' = 0.016675$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.61392
$n_{1970.1}$	1970.1	1.62058
$n_{1529.6}$	1529.6	1.62780
$n_{1060.0}$	1060.0	1.63577
n_t	1014.0	1.63673
n_s	852.1	1.64087
n_f	706.5	1.64649
n_C	656.3	1.64922
$n_{C'}$	643.8	1.65000
$n_{632.8}$	632.8	1.65072
n_D	589.3	1.65398
n_d	587.6	1.65412
n_e	546.1	1.65803
n_F	486.1	1.66570
$n_{F'}$	480.0	1.66667
n_g	435.8	1.67511
n_h	404.7	1.68318
n_i	365.0	1.69756
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.47460789
B_2	0.193584488
B_3	1.265899740
C_1	0.00986143816
C_2	0.0445477583
C_3	106.4362580

Constants of Formula for dn/dT	
D_0	4.54E-06
D_1	1.19E-08
D_2	2.93E-12
E_0	6.89E-07
E_1	8.60E-10
λ_{TK} [μm]	0.230

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	4.2	5.3	6.5	2.0	3.1	4.2
+20/+40	4.2	5.5	6.8	2.8	4.0	5.4
+60/+80	4.4	5.8	7.3	3.3	4.7	6.1

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.660	0.350
2325	0.830	0.620
1970	0.963	0.910
1530	0.988	0.970
1060	0.999	0.998
700	0.998	0.994
660	0.997	0.992
620	0.997	0.992
580	0.997	0.993
546	0.997	0.992
500	0.994	0.985
460	0.990	0.974
436	0.986	0.965
420	0.983	0.958
405	0.978	0.950
400	0.976	0.940
390	0.967	0.920
380	0.950	0.880
370	0.930	0.830
365	0.910	0.790
350	0.790	0.560
334	0.370	0.080
320	0.020	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{5}$	37/32
(*= λ_{70}/λ_5)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2511
$P_{C,s}$	0.5070
$P_{d,C}$	0.2972
$P_{e,d}$	0.2374
$P_{g,F}$	0.5710
$P_{t,h}$	0.8729
$P'_{s,t}$	0.2481
$P'_{C',s}$	0.5473
$P'_{d,C'}$	0.2474
$P'_{e,d}$	0.2345
$P'_{g,F'}$	0.5060
$P'_{i,h}$	0.8625

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0248
$\Delta P_{C,s}$	0.0115
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0060
$\Delta P_{i,g}$	-0.0286

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	6.4
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	7.4
T_g [°C]	584
T_{10}^{13} [°C]	593
$T_{10}^{7.6}$ [°C]	739
c_p [J/(g·K)]	0.730
λ [W/(m·K)]	0.950
AT [°C]	648
ρ [g/cm ³]	3.04
E [10^3 N/mm ²]	89
μ	0.243
K [10^{-6} mm ² /N]	3.57
HK _{0.1/20}	555
Abrasion Aa	122
CR	1
FR	0
SR	1
AR	1
PR	1
SR-J	1
WR-J	1

N-KZFS8
720347.320 $n_d = 1.72047$ $v_d = 34.70$ $n_F - n_C = 0.020763$ $n_e = 1.72539$ $v_e = 34.47$ $n_F' - n_C' = 0.021046$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.67524
$n_{1970.1}$	1970.1	1.68193
$n_{1529.6}$	1529.6	1.68939
$n_{1060.0}$	1060.0	1.69816
n_t	1014.0	1.69927
n_s	852.1	1.70416
n_f	706.5	1.71099
n_C	656.3	1.71437
$n_{C'}$	643.8	1.71532
$n_{632.8}$	632.8	1.71622
n_D	589.3	1.72029
n_d	587.6	1.72047
n_e	546.1	1.72539
n_F	486.1	1.73513
$n_{F'}$	480.0	1.73637
n_g	435.8	1.74724
n_h	404.7	1.75777
n_i	365.0	1.77690
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.62693651
B_2	0.243698760
B_3	1.620071410
C_1	0.01088086300
C_2	0.0494207753
C_3	131.0091630

Constants of Formula for dn/dT	
D_0	7.93E-07
D_1	6.47E-09
D_2	-5.00E-12
E_0	7.71E-07
E_1	1.01E-09
λ_{TK} [μm]	0.254

Temperature Coefficients of the Refractive Index						
	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
[°C]	1060.0	e	g	1060.0	e	g
-40/-20	2.7	4.1	5.6	0.4	1.7	3.2
+20/+40	2.4	4.0	5.8	0.9	2.5	4.2
+60/+80	2.4	4.1	6.1	1.2	2.9	4.9

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.510
2325	0.870	0.700
1970	0.967	0.920
1530	0.993	0.983
1060	0.999	0.999
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.997	0.993
500	0.994	0.985
460	0.988	0.971
436	0.982	0.955
420	0.976	0.940
405	0.967	0.920
400	0.963	0.910
390	0.950	0.870
380	0.920	0.820
370	0.890	0.740
365	0.860	0.680
350	0.670	0.360
334	0.140	0.010
320	0.040	0.000
310	0.000	
300		
290		
280		
270		
260		
250		

Color Code	
$\lambda_{80} / \lambda_{50}$	38/33
(*= $\lambda_{70}/\lambda_{50}$)	
Remarks	
suitable for precision molding, step 0.5 available	

Relative Partial Dispersion	
$P_{s,t}$	0.2353
$P_{C,s}$	0.4916
$P_{d,C}$	0.2940
$P_{e,d}$	0.2369
$P_{g,F}$	0.5833
$P_{t,h}$	0.9212
$P'_{s,t}$	0.2322
$P'_{C',s}$	0.5305
$P'_{d,C'}$	0.2445
$P'_{e,d}$	0.2337
$P'_{g,F'}$	0.5165
$P'_{i,h}$	0.9088

Deviation of Relative Partial Dispersion ΔP from the normal line	
$\Delta P_{C,t}$	0.0173
$\Delta P_{C,s}$	0.0078
$\Delta P_{F,e}$	-0.0011
$\Delta P_{g,F}$	-0.0021
$\Delta P_{i,g}$	-0.0048

Other Properties	
$\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$]	7.8
$\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$]	9.4
T_g [°C]	509
T_{10}^{13} [°C]	515
$T_{10}^{7.6}$ [°C]	635
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.050
AT [°C]	561
ρ [g/cm ³]	3.20
E [10^3 N/mm ²]	103
μ	0.248
K [10^{-6} mm ² /N]	2.94
HK _{0.1/20}	570
HG	4
Abrasion Aa	152
CR	1
FR	0
SR	1
AR	1
PR	1
SR-J	1
WR-J	1

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