SCHOTT
glass made of ideas

Optical Glass

Data Sheets Inquiry Glass

Table of Content

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:

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

The constants are valid for a temperature range from -100°C to +140°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

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

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

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°C in 10^{-6}/K
$\alpha_{20/300}$	=	The coefficient of linear thermal expansion in the temperature range between + 20°C und + 300°C in 10^{-6}/K
Tg	=	Transformation temperature in °C
$T_{10^{13.0}}$	=	Temperature of the glass in °C at a viscosity of 10^{13} dPa·s
$T_{10^{7.6}}$	=	Temperature of the glass in °C at a viscosity of $10^{7.6}$ dPa·s
c_p	=	average specific heat capacity in J/(g·K)
λ	=	Thermal conductivity in W/(m·K)
AT*	=	Yield point/sag temperature in °C
ρ	=	Density in g/cm^3
E	=	Elasticity modulus in 10^3 N/mm^2
μ	=	Poisson's ratio
K	=	Stress optical coefficient in 10^{-6} mm^2/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

Data Sheet

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BAFN6
589485.317

$n_d = 1.58900$	$\nu_d = 48.45$	$n_F - n_C = 0.012158$
$n_e = 1.59189$	$\nu_e = 48.16$	$n_{F'} - n_{C'} = 0.012291$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.55832
$n_{1970.1}$	1970.1	1.56349
$n_{1529.6}$	1529.6	1.56910
$n_{1060.0}$	1060.0	1.57522
n_t	1014.0	1.57596
n_s	852.1	1.57910
n_r	706.5	1.58332
n_C	656.3	1.58536
$n_{C'}$	643.8	1.58594
$n_{632.8}$	632.8	1.58647
n_D	589.3	1.58889
n_d	587.6	1.58900
n_e	546.1	1.59189
n_F	486.1	1.59752
$n_{F'}$	480.0	1.59823
n_g	435.8	1.60436
n_h	404.7	1.61017
n_i	365.0	1.62038
$n_{334.1}$	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	1.36719201
B_2	0.10907994
B_3	1.02108011
C_1	0.00882820704
C_2	0.0438731646
C_3	113.58602

Constants of Dispersion dn/dT

D_0	$1.34 \cdot 10^{-6}$
D_1	$1.34 \cdot 10^{-8}$
D_2	$-5.50 \cdot 10^{-11}$
E_0	$4.95 \cdot 10^{-7}$
E_1	$3.62 \cdot 10^{-10}$
λ_{TK} [µm]	0.265

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500		
2325	0.910	0.780
1970	0.976	0.940
1530	0.998	0.995
1060	0.998	0.995
700	0.999	0.997
660	0.998	0.995
620	0.998	0.994
580	0.998	0.994
546	0.996	0.991
500	0.994	0.986
460	0.990	0.975
436	0.985	0.963
420	0.981	0.954
405	0.976	0.940
400	0.971	0.930
390	0.954	0.890
380	0.920	0.810
370	0.850	0.670
365	0.790	0.560
350	0.430	0.120
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	38/33
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, lead containing

Relative Partial Dispersion

$P_{s,t}$	0.2580
$P_{C,s}$	0.5152
$P_{d,C}$	0.2993
$P_{e,d}$	0.2377
$P_{g,F}$	0.5625
$P_{i,h}$	0.8405
$P'_{s,t}$	0.2552
$P'_{C',s}$	0.5565
$P'_{d,C'}$	0.2492
$P'_{e,d}$	0.2351
$P'_{g,F'}$	0.4987
$P'_{i,h}$	0.8314

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0015
$\Delta P_{C,s}$	-0.0006
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	0.0002

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.8
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.5
T_g [°C]	549
$T_{10}^{13.0}$ [°C]	0
$T_{10}^{7.6}$ [°C]	0
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm³]	3.17
E [10^3 N/mm²]	77
μ	0.234
K [10^{-6} mm²/N]	2.50
HK$_{0.1/20}$	540
HG	
CR	2
FR	0
SR	2
AR	2
PR	1

Temperature Coefficients of 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	2.9	3.9	0.0	0.8	1.7
+20/ +40	2.3	3.2	4.3	1.0	1.8	2.8
+60/ +80	2.4	3.3	4.4	1.3	2.2	3.3

Data Sheet

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BK7G18
520636.252

$n_d = 1.51975$	$\nu_d = 63.58$	$n_F - n_C = 0.008174$
$n_e = 1.52170$	$\nu_e = 63.36$	$n_{F'} - n_{C'} = 0.008233$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.49203
$n_{1970.1}$	1970.1	1.49777
$n_{1529.6}$	1529.6	1.50373
$n_{1060.0}$	1060.0	1.50953
n_t	1014.0	1.51015
n_s	852.1	1.51267
n_r	706.5	1.51579
n_C	656.3	1.51724
$n_{C'}$	643.8	1.51764
$n_{632.8}$	632.8	1.51802
n_D	589.3	1.51968
n_d	587.6	1.51975
n_e	546.1	1.52170
n_F	486.1	1.52541
$n_{F'}$	480.0	1.52587
n_g	435.8	1.52981
n_h	404.7	1.53345
n_i	365.0	1.53970
$n_{334.1}$	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	1.26538542
B_2	0.0144191073
B_3	1.00323028
C_1	0.00813104078
C_2	0.0543303226
C_3	102.821166

Constants of Dispersion dn/dT

D_0	$1.52 \cdot 10^{-6}$
D_1	$1.37 \cdot 10^{-8}$
D_2	$-1.26 \cdot 10^{-11}$
E_0	$4.36 \cdot 10^{-7}$
E_1	$4.17 \cdot 10^{-10}$
λ_{TK} [µm]	0.194

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.634	0.320
2325	0.782	0.540
1970	0.933	0.841
1530	0.992	0.979
1060	0.999	0.998
700	0.997	0.993
660	0.995	0.988
620	0.994	0.984
580	0.992	0.979
546	0.989	0.973
500	0.982	0.957
460	0.970	0.927
436	0.947	0.873
420	0.905	0.780
405	0.815	0.600
400	0.764	0.510
390	0.601	0.280
380	0.360	0.080
370	0.080	
365	0.020	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	41/37
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.3077
$P_{C,s}$	0.5591
$P_{d,C}$	0.3071
$P_{e,d}$	0.2385
$P_{g,F}$	0.5376
$P_{i,h}$	0.7640
$P'_{s,t}$	0.3055
$P'_{C',s}$	0.6040
$P'_{d,C'}$	0.2561
$P'_{e,d}$	0.2368
$P'_{g,F'}$	0.4777
$P'_{i,h}$	0.7585

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0203
$\Delta P_{C,s}$	0.0080
$\Delta P_{F,e}$	-0.0006
$\Delta P_{g,F}$	0.0007
$\Delta P_{i,g}$	0.0189

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.2
T_g [°C]	585
$T_{10}^{13.0}$ [°C]	570
$T_{10}^{7.6}$ [°C]	722
c_p [J/(g·K)]	0.820
λ [W/(m·K)]	1.190
ρ [g/cm^3]	2.52
E [10^3 N/mm^2]	82
μ	0.205
K [10^{-6} mm^2/N]	2.77
HK$_{0.1/20}$	580
HG	
CR	
FR	0
SR	1
AR	2
PR	0

Temperature Coefficients of 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	2.7	3.3	0.2	0.7	1.2
+20/ +40	2.2	2.8	3.4	0.9	1.5	2.1
+60/ +80	2.4	3.0	3.7	1.4	2.0	2.6

Data Sheet

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F2G12
621366.360

n_d = 1.62072	ν_d = 36.56	$n_F - n_C$ = 0.016979
n_e = 1.62474	ν_e = 36.30	$n_{F'} - n_{C'}$ = 0.017212

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.58584
$n_{1970.1}$	1970.1	1.59051
$n_{1529.6}$	1529.6	1.59593
$n_{1060.0}$	1060.0	1.60265
n_t	1014.0	1.60353
n_s	852.1	1.60744
n_r	706.5	1.61298
n_C	656.3	1.61573
$n_{C'}$	643.8	1.61652
$n_{632.8}$	632.8	1.61725
n_D	589.3	1.62057
n_d	587.6	1.62072
n_e	546.1	1.62474
n_F	486.1	1.63271
$n_{F'}$	480.0	1.63373
n_g	435.8	1.64261
n_h	404.7	1.65121
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	1.34702224
B_2	0.210037763
B_3	19.5350768
C_1	0.00980850553
C_2	0.0471788018
C_3	2279.1547

Constants of Dispersion dn/dT

D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [µm]	

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.891	0.750
2325	0.924	0.820
1970	0.971	0.930
1530	0.996	0.989
1060	0.999	0.997
700	0.995	0.988
660	0.994	0.984
620	0.992	0.979
580	0.989	0.972
546	0.985	0.963
500	0.974	0.937
460	0.937	0.850
436	0.842	0.650
420	0.693	0.400
405	0.428	0.120
400	0.325	0.060
390	0.124	
380	0.019	
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	45/39
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2303
$P_{C,s}$	0.4883
$P_{d,C}$	0.2937
$P_{e,d}$	0.2369
$P_{g,F}$	0.5831
$P_{i,h}$	
$P'_{s,t}$	0.2272
$P'_{C',s}$	0.5271
$P'_{d,C'}$	0.2443
$P'_{e,d}$	0.2337
$P'_{g,F'}$	0.5163
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0002
$\Delta P_{C,s}$	0.0002
$\Delta P_{F,e}$	0.0002
$\Delta P_{g,F}$	0.0008
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.1
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.0
T_g [°C]	435
$T_{10}^{13.0}$ [°C]	438
$T_{10}^{7.6}$ [°C]	604
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.820
ρ [g/cm^3]	3.60
E [10^3 N/mm^2]	58
μ	0.222
K [10^{-6} mm^2/N]	2.79
HK$_{0.1/20}$	428
HG	
CR	1
FR	0
SR	1
AR	1.3
PR	2.3

Temperature Coefficients of 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						

Data Sheet

SCHOTT

FK3
464658.227

n_d = 1.46450	ν_d = 65.77	$n_F - n_C$ = 0.007063
n_e = 1.46619	ν_e = 65.57	$n_{F'} - n_{C'}$ = 0.007110

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.43972
$n_{1970.1}$	1970.1	1.44498
$n_{1529.6}$	1529.6	1.45039
$n_{1060.0}$	1060.0	1.45557
n_t	1014.0	1.45612
n_s	852.1	1.45834
n_r	706.5	1.46106
n_C	656.3	1.46232
$n_{C'}$	643.8	1.46267
$n_{632.8}$	632.8	1.46300
n_D	589.3	1.46444
n_d	587.6	1.46450
n_e	546.1	1.46619
n_F	486.1	1.46939
$n_{F'}$	480.0	1.46978
n_g	435.8	1.47315
n_h	404.7	1.47625
n_i	365.0	1.48149
$n_{334.1}$	334.1	1.48708
$n_{312.6}$	312.6	1.49217
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.973346627
B_2	0.146642231
B_3	0.679304225
C_1	0.00640795469
C_2	0.020565293
C_3	80.4965389

Constants of Dispersion dn/dT

D_0	$-4.90 \cdot 10^{-6}$
D_1	$1.23 \cdot 10^{-8}$
D_2	$-1.19 \cdot 10^{-10}$
E_0	$3.45 \cdot 10^{-7}$
E_1	$7.72 \cdot 10^{-10}$
λ_{TK} [µm]	0.18

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.650	0.340
2325	0.810	0.590
1970	0.971	0.930
1530	0.988	0.970
1060	0.998	0.995
700	0.997	0.993
660	0.997	0.993
620	0.997	0.993
580	0.997	0.993
546	0.997	0.993
500	0.997	0.993
460	0.996	0.990
436	0.996	0.989
420	0.995	0.987
405	0.994	0.986
400	0.994	0.985
390	0.994	0.984
380	0.992	0.980
370	0.988	0.971
365	0.985	0.964
350	0.954	0.890
334	0.890	0.740
320	0.700	0.410
310	0.510	0.190
300	0.300	0.050
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	33/30
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.3133
$P_{C,s}$	0.5644
$P_{d,C}$	0.3083
$P_{e,d}$	0.2387
$P_{g,F}$	0.5329
$P_{i,h}$	0.7419
$P'_{s,t}$	0.3112
$P'_{C',s}$	0.6097
$P'_{d,C'}$	0.2571
$P'_{e,d}$	0.2371
$P'_{g,F'}$	0.4736
$P'_{i,h}$	0.7370

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0207
$\Delta P_{C,s}$	0.0082
$\Delta P_{F,e}$	-0.0008
$\Delta P_{g,F}$	-0.0003
$\Delta P_{i,g}$	0.0079

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.4
T_g [°C]	362
$T_{10}^{13.0}$ [°C]	369
$T_{10}^{7.6}$ [°C]	622
c_p [J/(g·K)]	0.840
λ [W/(m·K)]	0.900
ρ [g/cm^3]	2.27
E [10^3 N/mm^2]	46
μ	0.243
K [10^{-6} mm^2/N]	3.71
HK$_{0.1/20}$	380
HG	0
CR	2
FR	3
SR	52.4
AR	2
PR	1

Temperature Coefficients of 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	-0.4	-0.1	-2.6	-2.4	-2.1
+20/ +40	-0.4	0.0	0.3	-1.7	-1.3	-1.0
+60/ +80	-0.6	-0.2	0.3	-1.6	-1.2	-0.8

Data Sheet

SCHOTT

K5G20
523568.259

$n_d = 1.52344$	$\nu_d = 56.76$	$n_F - n_C = 0.009222$
$n_e = 1.52564$	$\nu_e = 56.47$	$n_{F'} - n_{C'} = 0.009308$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.49784
$n_{1970.1}$	1970.1	1.50236
$n_{1529.6}$	1529.6	1.50730
$n_{1060.0}$	1060.0	1.51258
n_t	1014.0	1.51319
n_s	852.1	1.51573
n_r	706.5	1.51906
n_C	656.3	1.52065
$n_{C'}$	643.8	1.52109
$n_{632.8}$	632.8	1.52151
n_D	589.3	1.52336
n_d	587.6	1.52344
n_e	546.1	1.52564
n_F	486.1	1.52987
$n_{F'}$	480.0	1.53040
n_g	435.8	1.53494
n_h	404.7	1.53919
n_i	365.0	1.54651
$n_{334.1}$	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	1.14094396
B_2	0.14500119
B_3	37.4705786
C_1	0.00694945478
C_2	0.0310574444
C_3	4536.25624

Constants of Dispersion dn/dT

D_0	$-2.22 \cdot 10^{-6}$
D_1	$8.45 \cdot 10^{-9}$
D_2	$-3.31 \cdot 10^{-11}$
E_0	$5.44 \cdot 10^{-7}$
E_1	$4.95 \cdot 10^{-10}$
λ_{TK} [µm]	0.214

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.634	0.320
2325	0.733	0.460
1970	0.896	0.760
1530	0.990	0.976
1060	0.998	0.995
700	0.997	0.992
660	0.995	0.987
620	0.994	0.985
580	0.993	0.982
546	0.990	0.976
500	0.984	0.961
460	0.971	0.930
436	0.954	0.890
420	0.924	0.820
405	0.857	0.680
400	0.821	0.610
390	0.686	0.390
380	0.442	0.130
370	0.130	
365	0.029	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	41/37
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2764
$P_{C,s}$	0.5327
$P_{d,C}$	0.3027
$P_{e,d}$	0.2382
$P_{g,F}$	0.5500
$P_{i,h}$	0.7943
$P'_{s,t}$	0.2738
$P'_{C',s}$	0.5755
$P'_{d,C'}$	0.2523
$P'_{e,d}$	0.2360
$P'_{g,F'}$	0.4881
$P'_{i,h}$	0.7870

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0051
$\Delta P_{C,s}$	-0.0025
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	0.0017
$\Delta P_{i,g}$	0.0065

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.3
T_g [°C]	483
$T_{10}^{13.0}$ [°C]	501
$T_{10}^{7.6}$ [°C]	679
c_p [J/(g·K)]	0.790
λ [W/(m·K)]	1.000
ρ [g/cm³]	2.59
E [10^3 N/mm²]	68
µ	0.222
K [10^{-6} mm²/N]	
HK$_{0.1/20}$	510
HG	
CR	
FR	0
SR	1
AR	1
PR	0

Temperature Coefficients of 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	1.5	2.2	-1.2	-0.6	0.1
+20/ +40	0.6	1.4	2.1	-0.7	0.1	0.8
+60/ +80	0.6	1.4	2.2	-0.5	0.3	1.1

SCHOTT

KZFS12
696363.384

n_d = 1.69600	ν_d = 36.29	$n_F - n_C$ = 0.019179
n_e = 1.70055	ν_e = 36.06	$n_{F'} - n_{C'}$ = 0.019425

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.64970
$n_{1970.1}$	1970.1	1.65749
$n_{1529.6}$	1529.6	1.66580
$n_{1060.0}$	1060.0	1.67488
n_t	1014.0	1.67598
n_s	852.1	1.68071
n_r	706.5	1.68717
n_C	656.3	1.69033
$n_{C'}$	643.8	1.69122
$n_{632.8}$	632.8	1.69206
n_D	589.3	1.69583
n_d	587.6	1.69600
n_e	546.1	1.70055
n_F	486.1	1.70951
$n_{F'}$	480.0	1.71065
n_g	435.8	1.72059
n_h	404.7	1.73017
n_i	365.0	1.74746
$n_{334.1}$	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	1.55624873
B_2	0.239769276
B_3	0.947887658
C_1	0.0102012744
C_2	0.0469277969
C_3	69.8370722

Constants of Dispersion dn/dT

D_0	$4.36 \cdot 10^{-6}$
D_1	$1.32 \cdot 10^{-8}$
D_2	$-1.81 \cdot 10^{-11}$
E_0	$6.86 \cdot 10^{-7}$
E_1	$6.81 \cdot 10^{-10}$
λ_{TK} [µm]	0.253

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.276	0.040
2325	0.618	0.300
1970	0.919	0.810
1530	0.976	0.940
1060	0.998	0.994
700	0.997	0.993
660	0.997	0.992
620	0.997	0.992
580	0.996	0.991
546	0.996	0.991
500	0.994	0.986
460	0.988	0.971
436	0.977	0.944
420	0.963	0.910
405	0.933	0.840
400	0.919	0.810
390	0.877	0.720
380	0.804	0.580
370	0.679	0.380
365	0.574	0.250
350	0.109	0.004
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/35
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, lead containing glass type

Relative Partial Dispersion

$P_{s,t}$	0.2468
$P_{C,s}$	0.5013
$P_{d,C}$	0.2957
$P_{e,d}$	0.2371
$P_{g,F}$	0.5778
$P_{i,h}$	0.9012
$P'_{s,t}$	0.2436
$P'_{C',s}$	0.5409
$P'_{d,C'}$	0.2460
$P'_{e,d}$	0.2341
$P'_{g,F'}$	0.5118
$P'_{i,h}$	0.8898

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0309
$\Delta P_{C,s}$	0.0138
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0050
$\Delta P_{i,g}$	-0.0189

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	5.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	6.2
T_g [°C]	492
$T_{10}^{13.0}$ [°C]	476
$T_{10}^{7.6}$ [°C]	549
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.710
ρ [g/cm^3]	3.84
E [10^3 N/mm^2]	66
µ	0.279
K [10^{-6} mm^2/N]	2.35
HK$_{0.1/20}$	440
HG	4
CR	4
FR	1
SR	53.3
AR	4.3
PR	4.3

Temperature Coefficients of 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	5.4	6.8	1.9	3.1	4.4
+20/ +40	4.3	5.7	7.3	2.8	4.2	5.8
+60/ +80	4.5	6.0	7.8	3.4	4.9	6.6

Data Sheet

SCHOTT

LAK9G15
691548.353

$n_d = 1.69064$	$\nu_d = 54.76$	$n_F - n_C = 0.012612$
$n_e = 1.69364$	$\nu_e = 54.53$	$n_{F'} - n_{C'} = 0.012721$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.65362
$n_{1970.1}$	1970.1	1.66043
$n_{1529.6}$	1529.6	1.66783
$n_{1060.0}$	1060.0	1.67552
n_t	1014.0	1.67639
n_s	852.1	1.67999
n_r	706.5	1.68462
n_C	656.3	1.68680
$n_{C'}$	643.8	1.68741
$n_{632.8}$	632.8	1.68798
n_D	589.3	1.69052
n_d	587.6	1.69064
n_e	546.1	1.69364
n_F	486.1	1.69941
$n_{F'}$	480.0	1.70013
n_g	435.8	1.70630
n_h	404.7	1.71205
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	1.28773667
B_2	0.518244853
B_3	26.1756109
C_1	0.0055754192
C_2	0.0223679524
C_3	1892.2533

Constants of Dispersion dn/dT

D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [µm]	

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.480	0.160
2325	0.752	0.490
1970	0.963	0.910
1530	0.995	0.987
1060	0.998	0.996
700	0.994	0.986
660	0.993	0.982
620	0.991	0.978
580	0.989	0.973
546	0.985	0.964
500	0.971	0.930
460	0.919	0.810
436	0.799	0.570
420	0.634	0.320
405	0.382	0.090
400	0.292	0.040
390	0.122	0.010
380	0.026	
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	46/38
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2852
$P_{C,s}$	0.5400
$P_{d,C}$	0.3040
$P_{e,d}$	0.2383
$P_{g,F}$	0.5462
$P_{i,h}$	
$P'_{s,t}$	0.2828
$P'_{C',s}$	0.5834
$P'_{d,C'}$	0.2533
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4849
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0205
$\Delta P_{C,s}$	0.0095
$\Delta P_{F,e}$	-0.0018
$\Delta P_{g,F}$	-0.0055
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.3
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.6
T_g [°C]	634
$T_{10}^{13.0}$ [°C]	635
$T_{10}^{7.6}$ [°C]	710
c_p [J/(g·K)]	0.660
λ [W/(m·K)]	0.880
ρ [g/cm^3]	3.53
E [10^3 N/mm^2]	108
μ	0.288
K [10^{-6} mm^2/N]	1.86
HK$_{0.1/20}$	721
HG	
CR	2
FR	2
SR	53
AR	1.3
PR	4.3

Temperature Coefficients of 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						

Data Sheet

SCHOTT

LF5G15
584408.322

$n_d = 1.58397$	$\nu_d = 40.83$	$n_F - n_C = 0.014301$
$n_e = 1.58736$	$\nu_e = 40.55$	$n_{F'} - n_{C'} = 0.014484$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.55252
$n_{1970.1}$	1970.1	1.55707
$n_{1529.6}$	1529.6	1.56225
$n_{1060.0}$	1060.0	1.56842
n_t	1014.0	1.56920
n_s	852.1	1.57263
n_r	706.5	1.57739
n_C	656.3	1.57974
$n_{C'}$	643.8	1.58041
$n_{632.8}$	632.8	1.58103
n_D	589.3	1.58384
n_d	587.6	1.58397
n_e	546.1	1.58736
n_F	486.1	1.59404
$n_{F'}$	480.0	1.59489
n_g	435.8	1.60228
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	1.28887331
B_2	0.162818811
B_3	10.5579792
C_1	0.0092001566
C_2	0.0456954308
C_3	1275.44015

Constants of Dispersion dn/dT

D_0	
D_1	
D_2	
E_0	
E_1	
λ_{TK} [µm]	

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.693	0.400
2325	0.770	0.520
1970	0.912	0.795
1530	0.994	0.985
1060	0.999	0.998
700	0.997	0.992
660	0.996	0.989
620	0.995	0.987
580	0.993	0.984
546	0.991	0.979
500	0.985	0.963
460	0.966	0.918
436	0.917	0.805
420	0.833	0.632
405	0.657	0.350
400	0.569	0.244
390	0.350	0.070
380	0.134	
370	0.020	
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	43/37
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2397
$P_{C,s}$	0.4975
$P_{d,C}$	0.2957
$P_{e,d}$	0.2372
$P_{g,F}$	0.5759
$P_{i,h}$	
$P'_{s,t}$	0.2367
$P'_{C',s}$	0.5372
$P'_{d,C'}$	0.2460
$P'_{e,d}$	0.2342
$P'_{g,F'}$	0.5101
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0015
$\Delta P_{C,s}$	-0.0006
$\Delta P_{F,e}$	0.0002
$\Delta P_{g,F}$	0.0008
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.3
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.7
T_g [°C]	407
$T_{10}^{13.0}$ [°C]	412
$T_{10}^{7.6}$ [°C]	578
c_p [J/(g·K)]	0.600
λ [W/(m·K)]	0.860
ρ [g/cm^3]	3.22
E [10^3 N/mm^2]	60
μ	0.228
K [10^{-6} mm^2/N]	2.77
$HK_{0.1/20}$	446
HG	
CR	2
FR	0
SR	1
AR	1.3
PR	2.3

Temperature Coefficients of 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						

SCHOTT

LF5G19
597399.330

n_d = 1.59655	ν_d = 39.89	$n_F - n_C$ = 0.014954
n_e = 1.60010	ν_e = 39.60	$n_{F'} - n_{C'}$ = 0.015153

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.56416
$n_{1970.1}$	1970.1	1.56890
$n_{1529.6}$	1529.6	1.57419
$n_{1060.0}$	1060.0	1.58045
n_t	1014.0	1.58125
n_s	852.1	1.58477
n_r	706.5	1.58970
n_C	656.3	1.59214
$n_{C'}$	643.8	1.59284
$n_{632.8}$	632.8	1.59349
n_D	589.3	1.59642
n_d	587.6	1.59655
n_e	546.1	1.60010
n_F	486.1	1.60710
$n_{F'}$	480.0	1.60799
n_g	435.8	1.61578
n_h	404.7	1.62330
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	1.34611327
B_2	0.142428018
B_3	0.900477176
C_1	0.0097174385
C_2	0.0501911619
C_3	111.959703

Constants of Dispersion dn/dT

D_0	$-8.15 \cdot 10^{-6}$
D_1	$1.34 \cdot 10^{-8}$
D_2	$-9.22 \cdot 10^{-12}$
E_0	$8.57 \cdot 10^{-7}$
E_1	$8.26 \cdot 10^{-10}$
λ_{TK} [µm]	0.243

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.525	0.200
2325	0.631	0.316
1970	0.870	0.707
1530	0.992	0.979
1060	0.999	0.998
700	0.997	0.993
660	0.995	0.987
620	0.993	0.983
580	0.991	0.977
546	0.986	0.966
500	0.973	0.934
460	0.929	0.832
436	0.822	0.612
420	0.657	0.350
405	0.382	0.090
400	0.276	0.040
390	0.090	
380		
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	45/39
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2355
$P_{C,s}$	0.4930
$P_{d,C}$	0.2946
$P_{e,d}$	0.2370
$P_{g,F}$	0.5803
$P_{i,h}$	
$P'_{s,t}$	0.2324
$P'_{C',s}$	0.5322
$P'_{d,C'}$	0.2451
$P'_{e,d}$	0.2339
$P'_{g,F'}$	0.5139
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0056
$\Delta P_{C,s}$	-0.0028
$\Delta P_{F,e}$	0.0009
$\Delta P_{g,F}$	0.0036
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	10.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	11.4
T_g [°C]	474
$T_{10}^{13.0}$ [°C]	462
$T_{10}^{7.6}$ [°C]	606
c_p [J/(g·K)]	0.580
λ [W/(m·K)]	0.750
ρ [g/cm^3]	3.30
E [10^3 N/mm^2]	56
µ	0.242
K [10^{-6} mm^2/N]	2.80
HK$_{0.1/20}$	410
HG	2
CR	3
FR	2
SR	3.4
AR	2.2
PR	3

Temperature Coefficients of 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	-0.9	0.4	-4.2	-3.1	-1.8
+20/ +40	-2.0	-0.7	0.8	-3.3	-2.1	-0.6
+60/ +80	-1.8	-0.3	1.3	-2.8	-1.4	0.1

Data Sheet

SCHOTT

N-BAF3
583466.279

$n_d = 1.58272$	$\nu_d = 46.64$	$n_F - n_C = 0.012495$
$n_e = 1.58569$	$\nu_e = 46.35$	$n_{F'} - n_{C'} = 0.012637$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.54998
$n_{1970.1}$	1970.1	1.55574
$n_{1529.6}$	1529.6	1.56192
$n_{1060.0}$	1060.0	1.56850
n_t	1014.0	1.56927
n_s	852.1	1.57254
n_r	706.5	1.57689
n_C	656.3	1.57899
$n_{C'}$	643.8	1.57958
$n_{632.8}$	632.8	1.58013
n_D	589.3	1.58261
n_d	587.6	1.58272
n_e	546.1	1.58569
n_F	486.1	1.59149
$n_{F'}$	480.0	1.59222
n_g	435.8	1.59857
n_h	404.7	1.60463
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	1.34859634
B_2	0.10764424
B_3	1.13207084
C_1	0.00871492932
C_2	0.0478406436
C_3	112.936116

Constants of Dispersion dn/dT

D_0	$1.40 \cdot 10^{-6}$
D_1	$1.24 \cdot 10^{-8}$
D_2	$-9.39 \cdot 10^{-12}$
E_0	$5.91 \cdot 10^{-7}$
E_1	$7.44 \cdot 10^{-10}$
λ_{TK} [µm]	0.235

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.733	0.460
2325	0.847	0.660
1970	0.954	0.890
1530	0.992	0.980
1060	0.997	0.993
700	0.998	0.994
660	0.997	0.992
620	0.996	0.991
580	0.997	0.993
546	0.996	0.991
500	0.994	0.985
460	0.990	0.975
436	0.986	0.965
420	0.981	0.952
405	0.967	0.920
400	0.959	0.900
390	0.924	0.820
380	0.852	0.670
370	0.693	0.400
365	0.565	0.240
350	0.063	
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	39/35
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2616
$P_{C,s}$	0.5160
$P_{d,C}$	0.2987
$P_{e,d}$	0.2375
$P_{g,F}$	0.5669
$P_{i,h}$	
$P'_{s,t}$	0.2587
$P'_{C',s}$	0.5569
$P'_{d,C'}$	0.2487
$P'_{e,d}$	0.2348
$P'_{g,F'}$	0.5026
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0114
$\Delta P_{C,s}$	0.0044
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	0.0015
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.2
T_g [°C]	583
$T_{10}^{13.0}$ [°C]	573
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	1.040
ρ [g/cm^3]	2.79
E [10^3 N/mm^2]	82
μ	0.226
K [10^{-6} mm^2/N]	2.73
HK$_{0.1/20}$	560
HG	2
CR	1
FR	0
SR	1
AR	1
PR	1

Temperature Coefficients of 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	3.2	4.1	0.3	1.1	1.9
+20/ +40	2.4	3.4	4.4	1.0	2.0	3.0
+60/ +80	2.5	3.6	4.8	1.5	2.5	3.7

Data Sheet

SCHOTT

N-LAF3
717480.414

$n_d = 1.71700$	$\nu_d = 47.96$	$n_F - n_C = 0.014950$
$n_e = 1.72055$	$\nu_e = 47.68$	$n_{F'} - n_{C'} = 0.015112$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.68061
$n_{1970.1}$	1970.1	1.68653
$n_{1529.6}$	1529.6	1.69297
$n_{1060.0}$	1060.0	1.70017
n_t	1014.0	1.70105
n_s	852.1	1.70485
n_r	706.5	1.71001
n_C	656.3	1.71252
$n_{C'}$	643.8	1.71323
$n_{632.8}$	632.8	1.71389
n_D	589.3	1.71687
n_d	587.6	1.71700
n_e	546.1	1.72055
n_F	486.1	1.72747
$n_{F'}$	480.0	1.72834
n_g	435.8	1.73585
n_h	404.7	1.74293
n_i	365.0	1.75530
$n_{334.1}$	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	1.73155854
B_2	0.150874455
B_3	1.06586596
C_1	0.00953833914
C_2	0.0407887211
C_3	98.0758545

Constants of Dispersion dn/dT

D_0	$-2.35 \cdot 10^{-6}$
D_1	$1.07 \cdot 10^{-8}$
D_2	$-9.38 \cdot 10^{-12}$
E_0	$5.72 \cdot 10^{-7}$
E_1	$6.01 \cdot 10^{-10}$
λ_{TK} [µm]	0.22

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.626	0.310
2325	0.804	0.580
1970	0.950	0.880
1530	0.992	0.980
1060	0.997	0.993
700	0.997	0.993
660	0.997	0.993
620	0.997	0.993
580	0.997	0.993
546	0.997	0.993
500	0.994	0.985
460	0.987	0.968
436	0.982	0.955
420	0.976	0.940
405	0.963	0.910
400	0.954	0.890
390	0.928	0.830
380	0.877	0.720
370	0.782	0.540
365	0.707	0.420
350	0.314	0.060
334	0.006	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	39/34
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2538
$P_{C,s}$	0.5132
$P_{d,C}$	0.2994
$P_{e,d}$	0.2379
$P_{g,F}$	0.5603
$P_{i,h}$	0.8274
$P'_{s,t}$	0.2511
$P'_{C',s}$	0.5545
$P'_{d,C'}$	0.2494
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4967
$P'_{i,h}$	0.8185

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0054
$\Delta P_{C,s}$	-0.0015
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0028
$\Delta P_{i,g}$	-0.0210

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.6
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.7
T_g [°C]	646
$T_{10}^{13.0}$ [°C]	640
$T_{10}^{7.6}$ [°C]	740
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm^3]	4.14
E [10^3 N/mm^2]	95
μ	0.286
K [10^{-6} mm^2/N]	1.53
HK$_{0.1/20}$	580
HG	5
CR	2
FR	3
SR	52.3
AR	1.2
PR	3.3

Temperature Coefficients of 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	1.5	2.5	-1.7	-0.8	0.1
+20/ +40	0.6	1.6	2.7	-0.9	0.1	1.2
+60/ +80	0.7	1.8	3.0	-0.4	0.7	1.8

SCHOTT

N-LAF36
800424.443

n_d = 1.79952	ν_d = 42.37	$n_F - n_C$ = 0.018871
n_e = 1.80400	ν_e = 42.12	$n_{F'} - n_{C'}$ = 0.019090

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.75555
$n_{1970.1}$	1970.1	1.76246
$n_{1529.6}$	1529.6	1.77001
$n_{1060.0}$	1060.0	1.77862
n_t	1014.0	1.77969
n_s	852.1	1.78435
n_r	706.5	1.79076
n_C	656.3	1.79390
$n_{C'}$	643.8	1.79478
$n_{632.8}$	632.8	1.79561
n_D	589.3	1.79935
n_d	587.6	1.79952
n_e	546.1	1.80400
n_F	486.1	1.81277
$n_{F'}$	480.0	1.81387
n_g	435.8	1.82345
n_h	404.7	1.83252
n_i	365.0	1.84848
$n_{334.1}$	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	1.85744228
B_2	0.294098729
B_3	1.16615417
C_1	0.00982397191
C_2	0.0384309138
C_3	89.3984634

Constants of Dispersion dn/dT

D_0	$8.72 \cdot 10^{-6}$
D_1	$1.12 \cdot 10^{-8}$
D_2	$-1.38 \cdot 10^{-11}$
E_0	$7.81 \cdot 10^{-7}$
E_1	$9.48 \cdot 10^{-10}$
λ_{TK} [µm]	0.212

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.480	0.160
2325	0.770	0.520
1970	0.950	0.880
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.994
660	0.998	0.994
620	0.997	0.992
580	0.997	0.992
546	0.996	0.990
500	0.992	0.980
460	0.985	0.962
436	0.976	0.940
420	0.967	0.920
405	0.954	0.890
400	0.946	0.870
390	0.919	0.810
380	0.872	0.710
370	0.793	0.560
365	0.733	0.460
350	0.455	0.140
334	0.068	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/33
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2467
$P_{C,s}$	0.5059
$P_{d,C}$	0.2979
$P_{e,d}$	0.2377
$P_{g,F}$	0.5659
$P_{i,h}$	0.8455
$P'_{s,t}$	0.2439
$P'_{C',s}$	0.5465
$P'_{d,C'}$	0.2480
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5014
$P'_{i,h}$	0.8358

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0067
$\Delta P_{C,s}$	0.0043
$\Delta P_{F,e}$	-0.0016
$\Delta P_{g,F}$	-0.0067
$\Delta P_{i,g}$	-0.0424

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	5.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	6.8
T_g [°C]	579
$T_{10}^{13.0}$ [°C]	582
$T_{10}^{7.6}$ [°C]	670
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.790
ρ [g/cm^3]	4.43
E [10^3 N/mm^2]	110
μ	0.305
K [10^{-6} mm^2/N]	2.25
HK$_{0.1/20}$	680
HG	1
CR	1
FR	2
SR	52.3
AR	1
PR	3.3

Temperature Coefficients of 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	7.3	8.8	10.3	4.9	6.4	7.8
+20/ +40	7.4	9.1	10.8	5.9	7.6	9.2
+60/ +80	7.6	9.5	11.3	6.4	8.2	10.1

Data Sheet

SCHOTT

N-LAK33A
754523.422

$n_d = 1.75393$	$\nu_d = 52.27$	$n_F - n_C = 0.014424$
$n_e = 1.75737$	$\nu_e = 52.04$	$n_{F'} - n_{C'} = 0.014554$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.71278
$n_{1970.1}$	1970.1	1.72047
$n_{1529.6}$	1529.6	1.72855
$n_{1060.0}$	1060.0	1.73690
n_t	1014.0	1.73786
n_s	852.1	1.74186
n_r	706.5	1.74707
n_C	656.3	1.74956
$n_{C'}$	643.8	1.75025
$n_{632.8}$	632.8	1.75090
n_D	589.3	1.75380
n_d	587.6	1.75393
n_e	546.1	1.75737
n_F	486.1	1.76398
$n_{F'}$	480.0	1.76481
n_g	435.8	1.77187
n_h	404.7	1.77845
n_i	365.0	1.78972
$n_{334.1}$	334.1	1.80195
$n_{312.6}$	312.6	1.81325
$n_{296.7}$	296.7	1.82361
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.44116999
B_2	0.571749501
B_3	1.16605226
C_1	0.00680933877
C_2	0.0222291824
C_3	80.9379555

Constants of Dispersion dn/dT

D_0	$2.63 \cdot 10^{-6}$
D_1	$1.11 \cdot 10^{-8}$
D_2	$-3.92 \cdot 10^{-12}$
E_0	$5.02 \cdot 10^{-7}$
E_1	$5.08 \cdot 10^{-10}$
λ_{TK} [µm]	0.188

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.398	0.100
2325	0.686	0.390
1970	0.937	0.850
1530	0.990	0.975
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.995
546	0.998	0.996
500	0.998	0.994
460	0.994	0.986
436	0.991	0.978
420	0.988	0.970
405	0.981	0.953
400	0.976	0.940
390	0.967	0.920
380	0.950	0.880
370	0.924	0.820
365	0.905	0.780
350	0.804	0.580
334	0.601	0.280
320	0.336	0.060
310	0.160	
300	0.053	
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	38/30
(*= λ_{70}/λ_5)	

Remarks

will become inquiry glass as of Jan 2015, not recommended for new design

Temperature Coefficients of 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	4.3	5.1	1.1	1.9	2.7
+20/ +40	3.4	4.4	5.3	1.9	2.9	3.7
+60/ +80	3.6	4.7	5.6	2.4	3.5	4.4

Relative Partial Dispersion

$P_{s,t}$	0.2770
$P_{C,s}$	0.5338
$P_{d,C}$	0.3032
$P_{e,d}$	0.2383
$P_{g,F}$	0.5473
$P_{i,h}$	0.7814
$P'_{s,t}$	0.2746
$P'_{C',s}$	0.5769
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4857
$P'_{i,h}$	0.7744

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0180
$\Delta P_{C,s}$	0.0091
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0086
$\Delta P_{i,g}$	-0.0484

Other Properties

$\alpha_{-30/+70°C}[10^{-6}/K]$	5.8
$\alpha_{+20/+300°C}[10^{-6}/K]$	7.0
T_g[°C]	669
$T_{10}^{13.0}$[°C]	667
$T_{10}^{7.6}$[°C]	744
c_p[J/(g·K)]	0.550
λ [W/(m·K)]	0.810
ρ [g/cm^3]	4.22
E[10^3 N/mm^2]	121
µ	0.292
K[10^{-6} mm^2/N]	1.49
HK$_{0.1/20}$	740
HG	2
CR	1
FR	1
SR	51
AR	1
PR	2

SCHOTT

N-PSK53
620635.360

n_d = 1.62014	ν_d = 63.48	$n_F - n_C$ = 0.009769
n_e = 1.62247	ν_e = 63.19	$n_{F'} - n_{C'}$ = 0.009851

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59216
$n_{1970.1}$	1970.1	1.59732
$n_{1529.6}$	1529.6	1.60280
$n_{1060.0}$	1060.0	1.60851
n_t	1014.0	1.60917
n_s	852.1	1.61191
n_r	706.5	1.61547
n_C	656.3	1.61717
$n_{C'}$	643.8	1.61764
$n_{632.8}$	632.8	1.61808
n_D	589.3	1.62005
n_d	587.6	1.62014
n_e	546.1	1.62247
n_F	486.1	1.62694
$n_{F'}$	480.0	1.62749
n_g	435.8	1.63223
n_h	404.7	1.63662
n_i	365.0	1.64409
$n_{334.1}$	334.1	1.65211
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.3434087
B_2	0.241417935
B_3	0.952896897
C_1	0.00675074317
C_2	0.0219910513
C_3	103.551457

Constants of Dispersion dn/dT

D_0	$-9.29 \cdot 10^{-6}$
D_1	$5.78 \cdot 10^{-9}$
D_2	$8.87 \cdot 10^{-13}$
E_0	$4.59 \cdot 10^{-7}$
E_1	$5.86 \cdot 10^{-10}$
λ_{TK} [µm]	0.155

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.609	0.290
2325	0.764	0.510
1970	0.915	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	0.928	0.830
365	0.905	0.780
350	0.776	0.530
334	0.525	0.200
320	0.230	0.030
310	0.061	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/31
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2803
$P_{C,s}$	0.5384
$P_{d,C}$	0.3045
$P_{e,d}$	0.2385
$P_{g,F}$	0.5423
$P_{i,h}$	0.7641
$P'_{s,t}$	0.2779
$P'_{C',s}$	0.5820
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4814
$P'_{i,h}$	0.7577

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0274
$\Delta P_{C,s}$	-0.0125
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0053
$\Delta P_{i,g}$	0.0214

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.9
T_g [°C]	618
$T_{10}^{13.0}$ [°C]	606
$T_{10}^{7.6}$ [°C]	709
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm^3]	3.60
E [10^3 N/mm^2]	78
µ	0.288
K [10^{-6} mm^2/N]	1.16
HK$_{0.1/20}$	440
HG	6
CR	2
FR	1
SR	52.3
AR	1.2
PR	4.3

Temperature Coefficients of 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	-2.0	-1.5	-4.7	-4.2	-3.8
+20/ +40	-2.9	-2.3	-1.8	-4.3	-3.8	-3.2
+60/ +80	-3.0	-2.3	-1.7	-4.1	-3.4	-2.8

Data Sheet

SCHOTT

N-SF19
667331.290

$n_d = 1.66679$	$\nu_d = 33.12$	$n_F - n_C = 0.020131$
$n_e = 1.67154$	$\nu_e = 32.86$	$n_{F'} - n_{C'} = 0.020435$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.62384
$n_{1970.1}$	1970.1	1.63018
$n_{1529.6}$	1529.6	1.63723
$n_{1060.0}$	1060.0	1.64552
n_t	1014.0	1.64657
n_s	852.1	1.65120
n_r	706.5	1.65769
n_C	656.3	1.66092
$n_{C'}$	643.8	1.66184
$n_{632.8}$	632.8	1.66271
n_D	589.3	1.66661
n_d	587.6	1.66679
n_e	546.1	1.67154
n_F	486.1	1.68106
$n_{F'}$	480.0	1.68228
n_g	435.8	1.69309
n_h	404.7	1.70377
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	1.52005444
B_2	0.17573947
B_3	1.43623424
C_1	0.01096144
C_2	0.0593248486
C_3	126.795151

Constants of Dispersion dn/dT

D_0	$1.32 \cdot 10^{-6}$
D_1	$1.22 \cdot 10^{-8}$
D_2	$-1.36 \cdot 10^{-11}$
E_0	$7.64 \cdot 10^{-7}$
E_1	$1.09 \cdot 10^{-9}$
λ_{TK} [µm]	0.279

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.720	0.440
2325	0.826	0.620
1970	0.954	0.890
1530	0.988	0.970
1060	0.996	0.989
700	0.994	0.985
660	0.992	0.980
620	0.991	0.978
580	0.992	0.980
546	0.991	0.977
500	0.984	0.960
460	0.974	0.937
436	0.965	0.915
420	0.950	0.880
405	0.919	0.810
400	0.901	0.770
390	0.826	0.620
380	0.642	0.330
370	0.302	0.050
365	0.130	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/36
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2299
$P_{C,s}$	0.4831
$P_{d,C}$	0.2913
$P_{e,d}$	0.2362
$P_{g,F}$	0.5976
$P_{i,h}$	
$P'_{s,t}$	0.2265
$P'_{C',s}$	0.5208
$P'_{d,C'}$	0.2421
$P'_{e,d}$	0.2327
$P'_{g,F'}$	0.5289
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0109
$\Delta P_{C,s}$	0.0030
$\Delta P_{F,e}$	0.0015
$\Delta P_{g,F}$	0.0095
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.3
T_g [°C]	598
$T_{10}^{13.0}$ [°C]	585
$T_{10}^{7.6}$ [°C]	707
c_p [J/(g·K)]	0.750
λ [W/(m·K)]	1.020
ρ [g/cm^3]	2.90
E [10^3 N/mm^2]	88
μ	0.231
K [10^{-6} mm^2/N]	2.93
HK$_{0.1/20}$	630
HG	3
CR	1
FR	0
SR	1
AR	1.2
PR	1

Temperature Coefficients of 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	5.5	0.3	1.6	3.2
+20/ +40	2.6	4.2	6.2	1.2	2.7	4.7
+60/ +80	2.8	4.6	6.8	1.7	3.4	5.6

Data Sheet

SCHOTT

N-SF56
785261.328

$n_d = 1.78470$	$\nu_d = 26.10$	$n_F - n_C = 0.030071$
$n_e = 1.79179$	$\nu_e = 25.89$	$n_{F'} - n_{C'} = 0.030587$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.73010
$n_{1970.1}$	1970.1	1.73664
$n_{1529.6}$	1529.6	1.74431
$n_{1060.0}$	1060.0	1.75442
n_t	1014.0	1.75581
n_s	852.1	1.76213
n_r	706.5	1.77137
n_C	656.3	1.77607
$n_{C'}$	643.8	1.77741
$n_{632.8}$	632.8	1.77868
n_D	589.3	1.78444
n_d	587.6	1.78470
n_e	546.1	1.79179
n_F	486.1	1.80614
$n_{F'}$	480.0	1.80800
n_g	435.8	1.82460
n_h	404.7	1.84126
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	1.73562085
B_2	0.317487012
B_3	1.95398203
C_1	0.0129624742
C_2	0.0612884288
C_3	161.559441

Constants of Dispersion dn/dT

D_0	$-4.13 \cdot 10^{-6}$
D_1	$7.65 \cdot 10^{-9}$
D_2	$-1.12 \cdot 10^{-11}$
E_0	$9.90 \cdot 10^{-7}$
E_1	$1.57 \cdot 10^{-9}$
λ_{TK} [µm]	0.287

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.810	0.590
2325	0.857	0.680
1970	0.959	0.900
1530	0.992	0.981
1060	0.998	0.996
700	0.994	0.986
660	0.992	0.981
620	0.992	0.981
580	0.993	0.983
546	0.990	0.976
500	0.980	0.950
460	0.963	0.910
436	0.941	0.860
420	0.905	0.780
405	0.837	0.640
400	0.799	0.570
390	0.672	0.370
380	0.442	0.130
370	0.109	
365	0.020	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	44/37
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2101
$P_{C,s}$	0.4635
$P_{d,C}$	0.2872
$P_{e,d}$	0.2356
$P_{g,F}$	0.6139
$P_{i,h}$	
$P'_{s,t}$	0.2065
$P'_{C',s}$	0.4996
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2316
$P'_{g,F'}$	0.5427
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0048
$\Delta P_{C,s}$	-0.0002
$\Delta P_{F,e}$	0.0026
$\Delta P_{g,F}$	0.0140
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.0
T_g [°C]	592
$T_{10}^{13.0}$ [°C]	585
$T_{10}^{7.6}$ [°C]	691
c_p [J/(g·K)]	0.700
λ [W/(m·K)]	0.940
ρ [g/cm³]	3.28
E [10^3 N/mm²]	91
μ	0.255
K [10^{-6} mm²/N]	2.87
HK $_{0.1/20}$	560
HG	5
CR	1
FR	0
SR	1
AR	1.3
PR	1

Temperature Coefficients of 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	4.3	-2.5	-0.7	1.8
+20/ +40	-0.3	2.0	5.1	-1.8	0.5	3.5
+60/ +80	-0.2	2.4	5.9	-1.4	1.2	4.6

Data Sheet

SCHOTT

N-SF64
706302.299

$n_d = 1.70591$	$\nu_d = 30.23$	$n_F - n_C = 0.023350$
$n_e = 1.71142$	$\nu_e = 29.99$	$n_{F'} - n_{C'} = 0.023720$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.65993
$n_{1970.1}$	1970.1	1.66607
$n_{1529.6}$	1529.6	1.67306
$n_{1060.0}$	1060.0	1.68176
n_t	1014.0	1.68291
n_s	852.1	1.68806
n_r	706.5	1.69544
n_C	656.3	1.69914
$n_{C'}$	643.8	1.70020
$n_{632.8}$	632.8	1.70119
n_D	589.3	1.70571
n_d	587.6	1.70591
n_e	546.1	1.71142
n_F	486.1	1.72249
$n_{F'}$	480.0	1.72392
n_g	435.8	1.73657
n_h	404.7	1.74912
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	1.59163762
B_2	0.219908428
B_3	1.46929315
C_1	0.0118623434
C_2	0.0594585499
C_3	133.310762

Constants of Dispersion dn/dT

D_0	$-2.06 \cdot 10^{-6}$
D_1	$9.78 \cdot 10^{-9}$
D_2	$-1.67 \cdot 10^{-11}$
E_0	$8.67 \cdot 10^{-7}$
E_1	$1.23 \cdot 10^{-9}$
λ_{TK} [µm]	0.279

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.770	0.520
2325	0.837	0.640
1970	0.950	0.880
1530	0.992	0.979
1060	0.998	0.996
700	0.994	0.985
660	0.992	0.980
620	0.992	0.981
580	0.994	0.984
546	0.993	0.982
500	0.984	0.961
460	0.971	0.930
436	0.957	0.895
420	0.934	0.843
405	0.882	0.730
400	0.852	0.670
390	0.746	0.480
380	0.546	0.220
370	0.209	0.020
365	0.078	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	42/37
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2204
$P_{C,s}$	0.4746
$P_{d,C}$	0.2898
$P_{e,d}$	0.2361
$P_{g,F}$	0.6028
$P_{i,h}$	
$P'_{s,t}$	0.2169
$P'_{C',s}$	0.5117
$P'_{d,C'}$	0.2407
$P'_{e,d}$	0.2324
$P'_{g,F'}$	0.5333
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0066
$\Delta P_{C,s}$	0.0012
$\Delta P_{F,e}$	0.0017
$\Delta P_{g,F}$	0.0099
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.5
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.8
T_g [°C]	572
$T_{10}^{13.0}$ [°C]	576
$T_{10}^{7.6}$ [°C]	688
c_p [J/(g·K)]	0.750
λ [W/(m·K)]	0.980
ρ [g/cm³]	2.99
E [10^3 N/mm²]	88
μ	0.245
K [10^{-6} mm²/N]	2.95
HK$_{0.1/20}$	620
HG	4
CR	1
FR	0
SR	1
AR	1.2
PR	1

Temperature Coefficients of 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	2.4	4.4	-1.3	0.1	2.0
+20/ +40	0.9	2.7	5.1	-0.6	1.2	3.5
+60/ +80	1.0	3.0	5.6	-0.1	1.9	4.4

SCHOTT

N-SK10
623570.364

n_d = 1.62278	ν_d = 56.98	$n_F - n_C$ = 0.010929
n_e = 1.62539	ν_e = 56.70	$n_{F'} - n_{C'}$ = 0.011029

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59310
$n_{1970.1}$	1970.1	1.59837
$n_{1529.6}$	1529.6	1.60400
$n_{1060.0}$	1060.0	1.61000
n_t	1014.0	1.61071
n_s	852.1	1.61367
n_r	706.5	1.61759
n_C	656.3	1.61947
$n_{C'}$	643.8	1.62000
$n_{632.8}$	632.8	1.62049
n_D	589.3	1.62268
n_d	587.6	1.62278
n_e	546.1	1.62539
n_F	486.1	1.63040
$n_{F'}$	480.0	1.63102
n_g	435.8	1.63638
n_h	404.7	1.64137
n_i	365.0	1.64989
$n_{334.1}$	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	1.34972093
B_2	0.238587973
B_3	0.9667336
C_1	0.00736272269
C_2	0.0253765327
C_3	103.502909

Constants of Dispersion dn/dT

D_0	$5.05 \cdot 10^{-7}$
D_1	$1.16 \cdot 10^{-8}$
D_2	$-1.53 \cdot 10^{-11}$
E_0	$4.90 \cdot 10^{-7}$
E_1	$5.10 \cdot 10^{-10}$
λ_{TK} [µm]	0.183

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.733	0.460
2325	0.852	0.670
1970	0.967	0.920
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.995
660	0.997	0.993
620	0.998	0.994
580	0.998	0.996
546	0.998	0.996
500	0.998	0.995
460	0.996	0.990
436	0.995	0.987
420	0.994	0.985
405	0.990	0.975
400	0.988	0.970
390	0.980	0.950
380	0.963	0.910
370	0.933	0.840
365	0.910	0.790
350	0.770	0.520
334	0.414	0.110
320	0.068	
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/32
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2714
$P_{C,s}$	0.5302
$P_{d,C}$	0.3029
$P_{e,d}$	0.2384
$P_{g,F}$	0.5474
$P_{i,h}$	0.7803
$P'_{s,t}$	0.2689
$P'_{C',s}$	0.5731
$P'_{d,C'}$	0.2525
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4857
$P'_{i,h}$	0.7732

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0137
$\Delta P_{C,s}$	-0.0055
$\Delta P_{F,e}$	0.0003
$\Delta P_{g,F}$	-0.0005
$\Delta P_{i,g}$	-0.0103

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.8
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.8
T_g [°C]	633
$T_{10}^{13.0}$ [°C]	635
$T_{10}^{7.6}$ [°C]	758
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.770
ρ [g/cm^3]	3.64
E [10^3 N/mm^2]	81
µ	0.266
K [10^{-6} mm^2/N]	2.25
HK$_{0.1/20}$	550
HG	3
CR	3
FR	3
SR	52.2
AR	2
PR	2.2

Temperature Coefficients of 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	2.7	3.3	-0.2	0.4	1.0
+20/ +40	2.0	2.7	3.5	0.6	1.3	2.0
+60/ +80	2.1	2.9	3.7	1.0	1.8	2.6

Data Sheet

SCHOTT

N-SK15
623580.362

n_d = 1.62296	ν_d = 58.02	$n_F - n_C$ = 0.010737
n_e = 1.62552	ν_e = 57.75	$n_{F'} - n_{C'}$ = 0.010832

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59268
$n_{1970.1}$	1970.1	1.59822
$n_{1529.6}$	1529.6	1.60411
$n_{1060.0}$	1060.0	1.61027
n_t	1014.0	1.61098
n_s	852.1	1.61396
n_r	706.5	1.61785
n_C	656.3	1.61970
$n_{C'}$	643.8	1.62022
$n_{632.8}$	632.8	1.62070
n_D	589.3	1.62286
n_d	587.6	1.62296
n_e	546.1	1.62552
n_F	486.1	1.63044
$n_{F'}$	480.0	1.63105
n_g	435.8	1.63629
n_h	404.7	1.64116
n_i	365.0	1.64947
$n_{334.1}$	334.1	1.65846
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.30417786
B_2	0.28584116
B_3	0.974781572
C_1	0.00695051276
C_2	0.0232023703
C_3	99.016884

Constants of Dispersion dn/dT

D_0	$4.92 \cdot 10^{-7}$
D_1	$1.20 \cdot 10^{-8}$
D_2	$-2.96 \cdot 10^{-12}$
E_0	$4.66 \cdot 10^{-7}$
E_1	$5.16 \cdot 10^{-10}$
λ_{TK} [µm]	0.179

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.672	0.370
2325	0.826	0.620
1970	0.959	0.900
1530	0.990	0.975
1060	0.996	0.991
700	0.998	0.994
660	0.997	0.992
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.996	0.990
460	0.993	0.982
436	0.991	0.978
420	0.990	0.974
405	0.986	0.966
400	0.984	0.960
390	0.976	0.941
380	0.963	0.910
370	0.937	0.850
365	0.915	0.800
350	0.795	0.563
334	0.504	0.180
320	0.144	
310	0.010	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/31
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2770
$P_{C,s}$	0.5348
$P_{d,C}$	0.3036
$P_{e,d}$	0.2384
$P_{g,F}$	0.5453
$P_{i,h}$	0.7742
$P'_{s,t}$	0.2746
$P'_{C',s}$	0.5780
$P'_{d,C'}$	0.2531
$P'_{e,d}$	0.2363
$P'_{g,F'}$	0.4840
$P'_{i,h}$	0.7674

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0084
$\Delta P_{C,s}$	-0.0033
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	-0.0102

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.6
T_g [°C]	641
$T_{10}^{13.0}$ [°C]	634
$T_{10}^{7.6}$ [°C]	752
c_p [J/(g·K)]	0.570
λ [W/(m·K)]	0.770
ρ [g/cm^3]	3.62
E [10^3 N/mm^2]	84
μ	0.265
K [10^{-6} mm^2/N]	1.93
HK$_{0.1/20}$	620
HG	3
CR	3
FR	3
SR	52.2
AR	2
PR	3.2

Temperature Coefficients of 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	3.2	-0.2	0.4	1.0
+20/ +40	2.0	2.7	3.4	0.6	1.3	1.9
+60/ +80	2.1	2.9	3.7	1.1	1.8	2.5

Data Sheet

SCHOTT

P-PK53
527662.283

n_d = 1.52690	ν_d = 66.22	$n_F - n_C$ = 0.007957
n_e = 1.52880	ν_e = 65.92	$n_{F'} - n_{C'}$ = 0.008022

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	1.50808
$n_{1529.6}$	1529.6	1.51265
$n_{1060.0}$	1060.0	1.51738
n_t	1014.0	1.51792
n_s	852.1	1.52017
n_r	706.5	1.52309
n_C	656.3	1.52447
$n_{C'}$	643.8	1.52486
$n_{632.8}$	632.8	1.52522
n_D	589.3	1.52683
n_d	587.6	1.52690
n_e	546.1	1.52880
n_F	486.1	1.53243
$n_{F'}$	480.0	1.53288
n_g	435.8	1.53673
n_h	404.7	1.54029
n_i	365.0	1.54633
$n_{334.1}$	334.1	1.55280
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.960316767
B_2	0.340437227
B_3	0.777865595
C_1	0.00531032986
C_2	0.0175073434
C_3	106.87533

Constants of Dispersion dn/dT

D_0	$-1.65 \cdot 10^{-5}$
D_1	$-5.14 \cdot 10^{-10}$
D_2	$-2.02 \cdot 10^{-11}$
E_0	$4.11 \cdot 10^{-7}$
E_1	$4.17 \cdot 10^{-10}$
λ_{TK} [µm]	0.208

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.468	0.150
2325	0.574	0.250
1970	0.787	0.550
1530	0.981	0.954
1060	0.998	0.994
700	0.997	0.992
660	0.997	0.992
620	0.998	0.994
580	0.998	0.996
546	0.999	0.997
500	0.998	0.995
460	0.996	0.990
436	0.995	0.987
420	0.994	0.985
405	0.994	0.985
400	0.994	0.985
390	0.990	0.976
380	0.980	0.950
370	0.959	0.900
365	0.941	0.860
350	0.815	0.600
334	0.515	0.190
320	0.181	0.010
310	0.039	
300	0.003	
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/31
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, suitable for precision molding

Relative Partial Dispersion

$P_{s,t}$	0.2829
$P_{C,s}$	0.5408
$P_{d,C}$	0.3049
$P_{e,d}$	0.2386
$P_{g,F}$	0.5408
$P_{i,h}$	0.7592
$P'_{s,t}$	0.2806
$P'_{C',s}$	0.5846
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4802
$P'_{i,h}$	0.7530

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0354
$\Delta P_{C,s}$	-0.0165
$\Delta P_{F,e}$	0.0030
$\Delta P_{g,F}$	0.0084
$\Delta P_{i,g}$	0.0375

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	13.3
$\alpha_{+20/+300°C}$ [10^{-6}/K]	16.0
T_g [°C]	383
$T_{10}^{13.0}$ [°C]	390
$T_{10}^{7.6}$ [°C]	453
c_p [J/(g·K)]	0.770
λ [W/(m·K)]	0.640
ρ [g/cm^3]	2.83
E [10^3 N/mm^2]	59
µ	0.271
K [10^{-6} mm^2/N]	2.06
HK$_{0.1/20}$	335
HG	6
CR	2
FR	1
SR	51
AR	4.3
PR	4.3

Temperature Coefficients of 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	-4.5	-4.1	-7.0	-6.6	-6.2
+20/ +40	-5.6	-5.2	-4.7	-6.9	-6.5	-6.1
+60/ +80	-6.0	-5.5	-5.0	-7.0	-6.5	-6.0

SCHOTT

P-SF67
907214.424

n_d = 1.90680	ν_d = 21.40	$n_F - n_C$ = 0.042374
n_e = 1.91675	ν_e = 21.23	$n_{F'} - n_{C'}$ = 0.043191

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.83479
$n_{1970.1}$	1970.1	1.84280
$n_{1529.6}$	1529.6	1.85235
$n_{1060.0}$	1060.0	1.86543
n_t	1014.0	1.86727
n_s	852.1	1.87574
n_r	706.5	1.88833
n_C	656.3	1.89480
$n_{C'}$	643.8	1.89666
$n_{632.8}$	632.8	1.89841
n_D	589.3	1.90644
n_d	587.6	1.90680
n_e	546.1	1.91675
n_F	486.1	1.93717
$n_{F'}$	480.0	1.93985
n_g	435.8	1.96401
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	1.97464225
B_2	0.467095921
B_3	2.43154209
C_1	0.0145772324
C_2	0.0669790359
C_3	157.444895

Constants of Dispersion dn/dT

D_0	$4.82 \cdot 10^{-7}$
D_1	$1.15 \cdot 10^{-8}$
D_2	$-9.95 \cdot 10^{-12}$
E_0	$1.15 \cdot 10^{-6}$
E_1	$1.65 \cdot 10^{-9}$
λ_{TK} [µm]	0.315

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.933	0.840
2325	0.946	0.870
1970	0.984	0.960
1530	0.994	0.985
1060	0.994	0.985
700	0.983	0.958
660	0.981	0.952
620	0.978	0.946
580	0.971	0.930
546	0.954	0.890
500	0.901	0.770
460	0.810	0.590
436	0.707	0.420
420	0.574	0.250
405	0.364	0.080
400	0.276	0.040
390	0.090	
380	0.011	
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	48/39*
(*= λ_{70}/λ_5)	

Remarks

suitable for precision molding

Relative Partial Dispersion

$P_{s,t}$	0.1998
$P_{C,s}$	0.4498
$P_{d,C}$	0.2832
$P_{e,d}$	0.2348
$P_{g,F}$	0.6334
$P_{i,h}$	
$P'_{s,t}$	0.1960
$P'_{C',s}$	0.4843
$P'_{d,C'}$	0.2349
$P'_{e,d}$	0.2303
$P'_{g,F'}$	0.5595
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	-0.0030
$\Delta P_{F,e}$	0.0049
$\Delta P_{g,F}$	0.0256
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.4
T_g [°C]	539
$T_{10}^{13.0}$ [°C]	546
$T_{10}^{7.6}$ [°C]	663
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.790
ρ [g/cm^3]	4.24
E [10^3 N/mm^2]	90
μ	0.248
K [10^{-6} mm^2/N]	2.96
$HK_{0.1/20}$	440
HG	3
CR	1
FR	0
SR	1
AR	1.3
PR	1

Temperature Coefficients of 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	5.5	10.1	0.1	2.9	7.4
+20/ +40	2.8	6.3	11.7	1.2	4.6	10.0
+60/ +80	3.1	7.0	13.0	1.9	5.7	11.7

Data Sheet

SCHOTT

SF6G05
809253.520

$n_d = 1.80906$	$\nu_d = 25.28$	$n_F - n_C = 0.032015$
$n_e = 1.81661$	$\nu_e = 25.08$	$n_{F'} - n_{C'} = 0.032570$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.75661
$n_{1970.1}$	1970.1	1.76163
$n_{1529.6}$	1529.6	1.76797
$n_{1060.0}$	1060.0	1.77741
n_t	1014.0	1.77879
n_s	852.1	1.78524
n_r	706.5	1.79491
n_C	656.3	1.79988
$n_{C'}$	643.8	1.80131
$n_{632.8}$	632.8	1.80265
n_D	589.3	1.80878
n_d	587.6	1.80906
n_e	546.1	1.81661
n_F	486.1	1.83190
$n_{F'}$	480.0	1.83387
n_g	435.8	
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	1.62113942
B_2	0.506586092
B_3	10.4032298
C_1	0.0113478992
C_2	0.0535840223
C_3	1118.83658

Constants of Dispersion dn/dT

D_0	$6.90 \cdot 10^{-6}$
D_1	$1.76 \cdot 10^{-8}$
D_2	$-3.17 \cdot 10^{-11}$
E_0	$1.89 \cdot 10^{-6}$
E_1	$1.50 \cdot 10^{-9}$
λ_{TK} [µm]	0.256

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.847	0.660
2325	0.877	0.721
1970	0.965	0.915
1530	0.995	0.987
1060	0.998	0.994
700	0.985	0.962
660	0.980	0.950
620	0.972	0.931
580	0.958	0.898
546	0.917	0.805
500	0.642	0.330
460	0.090	0.080
436		
420		
405		
400		
390		
380		
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	52/46*
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.2013
$P_{C,s}$	0.4574
$P_{d,C}$	0.2866
$P_{e,d}$	0.2358
$P_{g,F}$	
$P_{i,h}$	
$P'_{s,t}$	0.1979
$P'_{C',s}$	0.4933
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2318
$P'_{g,F'}$	
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	-0.0062
$\Delta P_{C,s}$	-0.0044
$\Delta P_{F,e}$	0.0025
$\Delta P_{g,F}$	
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.8
$\alpha_{+20/+300°C}$ [10^{-6}/K]	
T_g [°C]	427
$T_{10}^{13.0}$ [°C]	0
$T_{10}^{7.6}$ [°C]	529
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm³]	5.20
E [10^3 N/mm²]	
µ	
K [10^{-6} mm²/N]	
$HK_{0.1/20}$	360
HG	
CR	4
FR	3
SR	51.3
AR	2.3
PR	3.3

Temperature Coefficients of 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	6.4	10.3		4.0	7.8	
+20/ +40	7.0	11.4		5.5	9.8	
+60/ +80	7.5	12.1		6.3	10.9	

Data Sheet

SCHOTT

SF57HT
847238.551

$n_d = 1.84666$	$\nu_d = 23.83$	$n_F - n_C = 0.035536$
$n_e = 1.85504$	$\nu_e = 23.64$	$n_{F'} - n_{C'} = 0.036166$

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_r	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	1.07186278
C_1	0.0143704198
C_2	0.0592801172
C_3	121.419942

Constants of Dispersion dn/dT

D_0	$7.26 \cdot 10^{-6}$
D_1	$1.88 \cdot 10^{-8}$
D_2	$-5.14 \cdot 10^{-11}$
E_0	$1.96 \cdot 10^{-6}$
E_1	$1.79 \cdot 10^{-9}$
λ_{TK} [µm]	0.276

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.911	0.792
2325	0.927	0.826
1970	0.979	0.948
1530	0.998	0.994
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	0.998	0.996
500	0.996	0.990
460	0.990	0.976
436	0.981	0.954
420	0.964	0.912
405	0.919	0.810
400	0.896	0.760
390	0.787	0.550
380	0.577	0.252
370	0.230	0.026
365	0.080	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/36*
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, lead containing

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
$P_{i,h}$	
$P'_{s,t}$	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 Dispersions 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

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.3
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.2
T_g [°C]	414
$T_{10}^{13.0}$ [°C]	391
$T_{10}^{7.6}$ [°C]	519
c_p [J/(g·K)]	0.360
λ [W/(m·K)]	0.620
ρ [g/cm³]	5.51
E [10^3 N/mm²]	54
μ	0.248
K [10^{-6} mm²/N]	0.02
HK $_{0.1/20}$	350
HG	1
CR	2
FR	5
SR	52.3
AR	2.3
PR	4.3

Temperature Coefficients of 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

Data Sheet

SCHOTT

SFL6
805254.337

$n_d = 1.80518$	$\nu_d = 25.39$	$n_F - n_C = 0.031708$
$n_e = 1.81265$	$\nu_e = 25.19$	$n_{F'} - n_{C'} = 0.032260$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.74897
$n_{1970.1}$	1970.1	1.75544
$n_{1529.6}$	1529.6	1.76311
$n_{1060.0}$	1060.0	1.77345
n_t	1014.0	1.77489
n_s	852.1	1.78147
n_r	706.5	1.79116
n_C	656.3	1.79609
$n_{C'}$	643.8	1.79751
$n_{632.8}$	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	1.82780
$n_{F'}$	480.0	1.82977
n_g	435.8	1.84733
n_h	404.7	1.86500
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	1.78922056
B_2	0.328427448
B_3	2.01639441
C_1	0.0135163537
C_2	0.0622729599
C_3	168.014713

Constants of Dispersion dn/dT

D_0	$-5.26 \cdot 10^{-6}$
D_1	$7.41 \cdot 10^{-9}$
D_2	$-1.89 \cdot 10^{-11}$
E_0	$1.02 \cdot 10^{-6}$
E_1	$1.62 \cdot 10^{-9}$
λ_{TK} [µm]	0.288

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500		
2325	0.930	0.840
1970	0.980	0.950
1530	0.998	0.995
1060	0.995	0.988
700	0.996	0.989
660	0.995	0.988
620	0.993	0.983
580	0.992	0.980
546	0.988	0.970
500	0.976	0.940
460	0.959	0.900
436	0.940	0.860
420	0.920	0.810
405	0.880	0.720
400	0.850	0.670
390	0.770	0.520
380	0.570	0.250
370	0.210	0.020
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	45/37
(*= λ_{70}/λ_5)	

Remarks

inquiry glass

Relative Partial Dispersion

$P_{s,t}$	0.2075
$P_{C,s}$	0.4611
$P_{d,C}$	0.2867
$P_{e,d}$	0.2355
$P_{g,F}$	0.6159
$P_{i,h}$	
$P'_{s,t}$	0.2040
$P'_{C',s}$	0.4970
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5444
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0032
$\Delta P_{C,s}$	-0.0010
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0148
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.3
T_g [°C]	585
$T_{10}^{13.0}$ [°C]	592
$T_{10}^{7.6}$ [°C]	0
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm^3]	3.37
E [10^3 N/mm^2]	93
μ	0.260
K [10^{-6} mm^2/N]	2.79
$HK_{0.1/20}$	570
HG	
CR	1
FR	0
SR	2
AR	1
PR	1

Temperature Coefficients of 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	1.1	3.8	-3.2	-1.4	1.2
+20/ +40	-1.0	1.4	4.7	-2.5	-0.1	3.1
+60/ +80	-0.9	1.8	5.4	-2.1	0.5	4.2

Data Sheet

SCHOTT

SFL57
847236.355

$n_d = 1.84666$	$\nu_d = 23.62$	$n_F - n_C = 0.035841$
$n_e = 1.85510$	$\nu_e = 23.43$	$n_{F'} - n_{C'} = 0.036489$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.78487
$n_{1970.1}$	1970.1	1.79171
$n_{1529.6}$	1529.6	1.79989
$n_{1060.0}$	1060.0	1.81117
n_t	1014.0	1.81276
n_s	852.1	1.82007
n_r	706.5	1.83089
n_C	656.3	1.83643
$n_{C'}$	643.8	1.83802
$n_{632.8}$	632.8	1.83952
n_D	589.3	1.84635
n_d	587.6	1.84666
n_e	546.1	1.85510
n_F	486.1	1.87227
$n_{F'}$	480.0	1.87451
n_g	435.8	1.89456
n_h	404.7	1.91488
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	1.88742326
B_2	0.360534025
B_3	2.26189313
C_1	0.0145939341
C_2	0.0648198946
C_3	176.062211

Constants of Dispersion dn/dT

D_0	$-3.63 \cdot 10^{-6}$
D_1	$8.61 \cdot 10^{-9}$
D_2	$-9.98 \cdot 10^{-12}$
E_0	$1.10 \cdot 10^{-6}$
E_1	$1.69 \cdot 10^{-9}$
λ_{TK} [µm]	0.293

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.882	0.730
2325	0.910	0.790
1970	0.984	0.960
1530	0.996	0.990
1060	0.996	0.991
700	0.990	0.976
660	0.987	0.969
620	0.988	0.971
580	0.988	0.971
546	0.982	0.955
500	0.954	0.890
460	0.915	0.800
436	0.852	0.670
420	0.770	0.520
405	0.609	0.290
400	0.525	0.200
390	0.260	0.030
380	0.050	
370		
365		
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	44/38*
(*= λ_{70}/λ_5)	

Remarks

inquiry glass, lead containing

Relative Partial Dispersion

$P_{s,t}$	0.2038
$P_{C,s}$	0.4566
$P_{d,C}$	0.2855
$P_{e,d}$	0.2353
$P_{g,F}$	0.6218
$P_{i,h}$	
$P'_{s,t}$	0.2002
$P'_{C',s}$	0.4920
$P'_{d,C'}$	0.2369
$P'_{e,d}$	0.2311
$P'_{g,F'}$	0.5495
$P'_{i,h}$	

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

$\Delta P_{C,t}$	0.0034
$\Delta P_{C,s}$	-0.0014
$\Delta P_{F,e}$	0.0033
$\Delta P_{g,F}$	0.0177
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.7
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.0
T_g [°C]	598
$T_{10}^{13.0}$ [°C]	0
$T_{10}^{7.6}$ [°C]	700
c_p [J/(g·K)]	0.670
λ [W/(m·K)]	0.997
ρ [g/cm^3]	3.55
E [10^3 N/mm^2]	97
μ	0.261
K [10^{-6} mm^2/N]	2.73
HK$_{0.1/20}$	580
HG	3
CR	1
FR	0
SR	1.3
AR	1
PR	1.3

Temperature Coefficients of 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	2.4	5.6	-2.3	-0.1	3.0
+20/ +40	0.1	2.9	6.8	-1.5	1.2	5.1
+60/ +80	0.2	3.3	7.7	-1.0	2.1	6.4

Your Global Contacts

Germany

SCHOTT AG
Advanced Optics
Hattenbergstrasse 10
55122 Mainz
Germany
Phone +49 (0)6131/66-1812
Fax +49 (0)6131/2888-9047
info.optics@schott.com
www.schott.com/advanced_optics

China

SCHOTT(Shanghai)
Precision Materials & Equipment
International Trading Co., Ltd
Unit 301,RND Tower,No. 1801 Hongmei
Road,Shanghai, PRC (200233)
China
Phone +86 (0) 21 33678000
Fax +86 (0) 21 33678080/33678886
info.china@schott.com
www.schott.com/china

North America

SCHOTT North America, Inc.
Advanced Optics
400 York Avenue
Duryea, PA 18642, USA
Phone 1-570-457-7485
Fax 1-570-457-7330
info.optics@us.schott.com
www.us.schott.com/advanced_optics

Japan

SCHOTT Nippon K.K.
Advanced Optics
9F, 4-16-3, Yotsuya
Shinjuku-ku
160-0004 Tokyo
Japan
Phone +81-3-5366-2491
Fax +81-3-5366-2481
sn.info@schott.com/japan
www.schott.com/japan

Singapore

SCHOTT Singapore Pte. Ltd.
8 Admiralty Street
#05-01 Admirax
Singapore 757438.
Phone +65-64882366 (Main line)
Fax +65-62860838 (General Fax)
sales.singapore@schott.com

Taiwan

SCHOTT Taiwan Ltd
8F-3, No. 126, Sec. 4,
Nanking E. Road,
Taipei 105
Taiwan
Phone +886 (0)2 2570 9626 ext. 11
Fax +886 (0)2 2570 9628
info.taiwan@schott.com

Malaysia

SCHOTT Glass (Malaysia) SDN. BHD.
2024 Tinkat Perusahaan 6
Zon Perindustrian Bebas 2
13600 Perai/Penang
Malaysia
Phone +60 4-3898100
Fax +60 4-3993861
schott.mypen@schott.com

Korea

SCHOTT Korea Co., Ltd.
5th Floor BK Tower, 434 Samseong-ro
Gangnam-gu, Seoul, Korea 135-845
Phone +82-2-3456-0325
Fax +82-2-3456-0301
info.kr@schott.com
www.schott.com/korea

SCHOTT AG
Advanced Optics
Hattenbergstrasse 10
55122 Mainz
Germany
Phone +49 (0)6131/66-1812
Fax +49 (0)6131/2888-9047
info.optics@schott.com
www.schott.com/advanced_optics