Data Sheet

SCHOTT

N-SF14
762265.312

$n_d = 1.76182$	$\nu_d = 26.53$	$n_F - n_C = 0.028715$
$n_e = 1.76859$	$\nu_e = 26.32$	$n_{F'} - n_{C'} = 0.029204$

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_t	1014.0	1.73417
n_s	852.1	1.74022
n_r	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	1.7045187
C_1	0.0130512113
C_2	0.061369188
C_3	149.517689

Constants of Dispersion dn/dT

D_0	$-5.56 \cdot 10^{-6}$
D_1	$7.09 \cdot 10^{-9}$
D_2	$-1.09 \cdot 10^{-11}$
E_0	$9.85 \cdot 10^{-7}$
E_1	$1.39 \cdot 10^{-9}$
λ_{TK} [µm]	0.287

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.799	0.570
2325	0.837	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	0.946	0.870
405	0.910	0.790
400	0.891	0.750
390	0.821	0.610
380	0.642	0.330
370	0.276	0.040
365	0.095	0.004
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	42/36
(*= λ_{70}/λ_5)	

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

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.9
T_g [°C]	566
$T_{10}^{13.0}$ [°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

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	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