Data Sheet

SCHOTT

N-SF15
699302.292

$n_d = 1.69892$	$\nu_d = 30.20$	$n_F - n_C = 0.023142$
$n_e = 1.70438$	$\nu_e = 29.96$	$n_{F'} - n_{C'} = 0.023511$

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_r	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	1.50824017
C_1	0.0116507014
C_2	0.0597856897
C_3	132.709339

Constants of Dispersion dn/dT

D_0	$-7.15 \cdot 10^{-7}$
D_1	$1.04 \cdot 10^{-8}$
D_2	$-2.62 \cdot 10^{-11}$
E_0	$8.56 \cdot 10^{-7}$
E_1	$1.29 \cdot 10^{-9}$
λ_{TK} [µm]	0.281

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.764	0.510
2325	0.837	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	0.943
436	0.964	0.912
420	0.941	0.860
405	0.887	0.740
400	0.857	0.680
390	0.746	0.480
380	0.525	0.200
370	0.158	0.010
365	0.044	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	42/37
(*= λ_{70}/λ_5)	

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

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.3
T_g [°C]	580
$T_{10}^{13.0}$ [°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

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	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