Data Sheet

SCHOTT

LF5
581409.322

n_d = 1.58144	ν_d = 40.85	$n_F - n_C$ = 0.014233
n_e = 1.58482	ν_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_r	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	110.493685

Constants of Dispersion dn/dT

D_0	$-2.27 \cdot 10^{-6}$
D_1	$9.71 \cdot 10^{-9}$
D_2	$-2.83 \cdot 10^{-11}$
E_0	$8.36 \cdot 10^{-7}$
E_1	$9.95 \cdot 10^{-10}$
λ_{TK} [µm]	0.228

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500		
2325	0.847	0.660
1970	0.946	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	0.799	0.570
320	0.320	0.040
310	0.040	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	34/31
(*= λ_{70}/λ_5)	

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
$P_{i,h}$	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 Dispersions 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

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.1
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.6
T_g [°C]	419
$T_{10^{13.0}}$ [°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

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	1.9	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