Data Sheet

SCHOTT

LF5G19
597399.330

$n_d = 1.59655$	$\nu_d = 39.89$	$n_F - n_C = 0.014954$
$n_e = 1.60010$	$\nu_e = 39.60$	$n_{F'} - n_{C'} = 0.015153$

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