Data Sheet

SCHOTT

LLF1HTi
548459.294

n_d = 1.54815	ν_d = 45.90	$n_F - n_C$ = 0.011942
n_e = 1.55099	ν_e = 45.62	$n_{F'} - n_{C'}$ = 0.012078

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.51863
$n_{1970.1}$	1970.1	1.52354
$n_{1529.6}$	1529.6	1.52886
$n_{1060.0}$	1060.0	1.53473
n_t	1014.0	1.53544
n_s	852.1	1.53848
n_r	706.5	1.54259
n_C	656.3	1.54459
$n_{C'}$	643.8	1.54515
$n_{632.8}$	632.8	1.54568
n_D	589.3	1.54804
n_d	587.6	1.54815
n_e	546.1	1.55099
n_F	486.1	1.55653
$n_{F'}$	480.0	1.55723
n_g	435.8	1.56328
n_h	404.7	1.56904
n_i	365.0	1.57920
$n_{334.1}$	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	1.22510445
B_2	0.125155671
B_3	0.892236751
C_1	0.00870432098
C_2	0.0427325235
C_3	108.049968

Constants of Dispersion dn/dT

D_0	$2.55 \cdot 10^{-7}$
D_1	$1.41 \cdot 10^{-8}$
D_2	$-3.32 \cdot 10^{-11}$
E_0	$6.74 \cdot 10^{-7}$
E_1	$6.27 \cdot 10^{-10}$
λ_{TK} [µm]	0.227

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.744	0.477
2325	0.804	0.579
1970	0.930	0.833
1530	0.996	0.990
1060	0.999	0.999
700	0.999	0.999
660	0.999	0.998
620	0.999	0.998
580	0.999	0.998
546	0.999	0.998
500	0.999	0.998
460	0.999	0.998
436	0.999	0.997
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.998	0.996
380	0.998	0.995
370	0.998	0.994
365	0.997	0.993
350	0.993	0.982
334	0.955	0.892
320	0.721	0.441
310	0.231	0.026
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	33/31
(*= λ_{70}/λ_5)	

Remarks

i-line glass

Relative Partial Dispersion

$P_{s,t}$	0.2544
$P_{C,s}$	0.5114
$P_{d,C}$	0.2985
$P_{e,d}$	0.2376
$P_{g,F}$	0.5656
$P_{i,h}$	0.8512
$P'_{s,t}$	0.2515
$P'_{C',s}$	0.5523
$P'_{d,C'}$	0.2485
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5014
$P'_{i,h}$	0.8416

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

$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	0.0015
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0062

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.1
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.2
T_g [°C]	431
$T_{10}^{13.0}$ [°C]	426
$T_{10}^{7.6}$ [°C]	628
c_p [J/(g·K)]	0.650
λ [W/(m·K)]	0.990
ρ [g/cm^3]	2.94
E [10^3 N/mm^2]	60
μ	0.208
K [10^{-6} mm^2/N]	3.05
HK$_{0.1/20}$	450
HG	
CR	1
FR	0
SR	1
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	1.7	2.6	3.5	-0.4	0.5	1.4
+20/ +40	1.8	2.9	3.9	0.5	1.5	2.5
+60/ +80	2.0	3.1	4.2	0.9	2.0	3.1