Data Sheet

SCHOTT

K7
511604.253

$n_d = 1.51112$	$\nu_d = 60.41$	$n_F - n_C = 0.008461$
$n_e = 1.51314$	$\nu_e = 60.15$	$n_{F'} - n_{C'} = 0.008531$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.48553
$n_{1970.1}$	1970.1	1.49046
$n_{1529.6}$	1529.6	1.49565
$n_{1060.0}$	1060.0	1.50091
n_t	1014.0	1.50150
n_s	852.1	1.50394
n_r	706.5	1.50707
n_C	656.3	1.50854
$n_{C'}$	643.8	1.50895
$n_{632.8}$	632.8	1.50934
n_D	589.3	1.51105
n_d	587.6	1.51112
n_e	546.1	1.51314
n_F	486.1	1.51700
$n_{F'}$	480.0	1.51748
n_g	435.8	1.52159
n_h	404.7	1.52540
n_i	365.0	1.53189
$n_{334.1}$	334.1	1.53891
$n_{312.6}$	312.6	1.54537
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.1273555
B_2	0.124412303
B_3	0.827100531
C_1	0.00720341707
C_2	0.0269835916
C_3	100.384588

Constants of Dispersion dn/dT

D_0	$-1.67 \cdot 10^{-6}$
D_1	$8.80 \cdot 10^{-9}$
D_2	$-2.86 \cdot 10^{-11}$
E_0	$5.42 \cdot 10^{-7}$
E_1	$7.81 \cdot 10^{-10}$
λ_{TK} [µm]	0.172

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.650	0.340
2325	0.758	0.500
1970	0.910	0.790
1530	0.992	0.980
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.994
546	0.998	0.994
500	0.997	0.993
460	0.996	0.990
436	0.996	0.990
420	0.996	0.990
405	0.996	0.990
400	0.996	0.990
390	0.995	0.988
380	0.993	0.983
370	0.990	0.976
365	0.988	0.971
350	0.976	0.940
334	0.905	0.780
320	0.707	0.420
310	0.398	0.100
300	0.090	
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	33/30
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2880
$P_{C,s}$	0.5436
$P_{d,C}$	0.3049
$P_{e,d}$	0.2385
$P_{g,F}$	0.5422
$P_{i,h}$	0.7677
$P'_{s,t}$	0.2857
$P'_{C',s}$	0.5874
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4814
$P'_{i,h}$	0.7614

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

$\Delta P_{C,t}$	0.0001
$\Delta P_{C,s}$	-0.0001
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	0.0000
$\Delta P_{i,g}$	-0.0001

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.7
T_g [°C]	513
$T_{10}^{13.0}$ [°C]	0
$T_{10}^{7.6}$ [°C]	712
c_p [J/(g·K)]	
λ [W/(m·K)]	
ρ [g/cm^3]	2.53
E [10^3 N/mm^2]	69
μ	0.214
K [10^{-6} mm^2/N]	2.95
HK$_{0.1/20}$	520
HG	3
CR	3
FR	0
SR	2
AR	1
PR	2.3

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	1.0	1.6	2.1	-1.0	-0.4	0.1
+20/ +40	0.9	1.6	2.2	-0.4	0.2	0.9
+60/ +80	0.8	1.6	2.3	-0.2	0.6	1.2