Data Sheet

SCHOTT

N-LAK12
678552.410

$n_d = 1.67790$	$\nu_d = 55.20$	$n_F - n_C = 0.012281$
$n_e = 1.68083$	$\nu_e = 54.92$	$n_{F'} - n_{C'} = 0.012396$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.64541
$n_{1970.1}$	1970.1	1.65107
$n_{1529.6}$	1529.6	1.65713
$n_{1060.0}$	1060.0	1.66366
n_t	1014.0	1.66443
n_s	852.1	1.66772
n_r	706.5	1.67209
n_C	656.3	1.67419
$n_{C'}$	643.8	1.67478
$n_{632.8}$	632.8	1.67533
n_D	589.3	1.67779
n_d	587.6	1.67790
n_e	546.1	1.68083
n_F	486.1	1.68647
$n_{F'}$	480.0	1.68717
n_g	435.8	1.69320
n_h	404.7	1.69882
n_i	365.0	1.70842
$n_{334.1}$	334.1	1.71881
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.17365704
B_2	0.588992398
B_3	0.978014394
C_1	0.00577031797
C_2	0.0200401678
C_3	95.4873482

Constants of Dispersion dn/dT

D_0	$-5.67 \cdot 10^{-6}$
D_1	$8.27 \cdot 10^{-9}$
D_2	$1.27 \cdot 10^{-12}$
E_0	$5.25 \cdot 10^{-7}$
E_1	$6.30 \cdot 10^{-10}$
λ_{TK} [µm]	0.162

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.592	0.270
2325	0.764	0.510
1970	0.937	0.850
1530	0.990	0.975
1060	0.997	0.992
700	0.997	0.993
660	0.996	0.989
620	0.995	0.988
580	0.996	0.990
546	0.996	0.991
500	0.994	0.986
460	0.987	0.968
436	0.983	0.958
420	0.981	0.952
405	0.977	0.943
400	0.976	0.940
390	0.967	0.920
380	0.946	0.870
370	0.910	0.790
365	0.882	0.730
350	0.733	0.460
334	0.468	0.150
320	0.152	0.010
310	0.032	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	37/31
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2673
$P_{C,s}$	0.5269
$P_{d,C}$	0.3024
$P_{e,d}$	0.2383
$P_{g,F}$	0.5485
$P_{i,h}$	0.7818
$P'_{s,t}$	0.2648
$P'_{C',s}$	0.5695
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4866
$P'_{i,h}$	0.7746

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

$\Delta P_{C,t}$	-0.0126
$\Delta P_{C,s}$	-0.0047
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	-0.0226

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.6
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.3
T_g [°C]	614
$T_{10}^{13.0}$ [°C]	606
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.510
λ [W/(m·K)]	0.680
ρ [g/cm^3]	4.10
E [10^3 N/mm^2]	87
µ	0.288
K [10^{-6} mm^2/N]	1.44
HK$_{0.1/20}$	560
HG	6
CR	3
FR	1
SR	53.3
AR	3.3
PR	4.3

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	-0.3	0.3	-3.2	-2.6	-2.0
+20/ +40	-1.2	-0.4	0.3	-2.7	-1.9	-1.2
+60/ +80	-1.2	-0.3	0.5	-2.3	-1.5	-0.7