Data Sheet

SCHOTT

N-LASF44
804465.444

$n_d = 1.80420$	$\nu_d = 46.50$	$n_F - n_C = 0.017294$
$n_e = 1.80832$	$\nu_e = 46.25$	$n_{F'} - n_{C'} = 0.017476$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.76070
$n_{1970.1}$	1970.1	1.76801
$n_{1529.6}$	1529.6	1.77590
$n_{1060.0}$	1060.0	1.78455
n_t	1014.0	1.78560
n_s	852.1	1.79006
n_r	706.5	1.79609
n_C	656.3	1.79901
$n_{C'}$	643.8	1.79983
$n_{632.8}$	632.8	1.80060
n_D	589.3	1.80405
n_d	587.6	1.80420
n_e	546.1	1.80832
n_F	486.1	1.81630
$n_{F'}$	480.0	1.81731
n_g	435.8	1.82594
n_h	404.7	1.83405
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	1.78897105
B_2	0.38675867
B_3	1.30506243
C_1	0.00872506277
C_2	0.0308085023
C_3	92.7743824

Constants of Dispersion dn/dT

D_0	$3.32 \cdot 10^{-6}$
D_1	$1.12 \cdot 10^{-8}$
D_2	$-8.52 \cdot 10^{-12}$
E_0	$5.88 \cdot 10^{-7}$
E_1	$7.13 \cdot 10^{-10}$
λ_{TK} [µm]	0.209

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.468	0.150
2325	0.739	0.470
1970	0.946	0.870
1530	0.990	0.975
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.996	0.989
460	0.991	0.977
436	0.986	0.965
420	0.980	0.950
405	0.967	0.920
400	0.963	0.910
390	0.946	0.870
380	0.911	0.793
370	0.860	0.685
365	0.823	0.615
350	0.658	0.351
334	0.378	0.088
320	0.152	
310	0.068	
300	0.029	
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	40/31
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2582
$P_{C,s}$	0.5171
$P_{d,C}$	0.3002
$P_{e,d}$	0.2380
$P_{g,F}$	0.5572
$P_{i,h}$	
$P'_{s,t}$	0.2555
$P'_{C',s}$	0.5588
$P'_{d,C'}$	0.2501
$P'_{e,d}$	0.2355
$P'_{g,F'}$	0.4941
$P'_{i,h}$	

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

$\Delta P_{C,t}$	0.0098
$\Delta P_{C,s}$	0.0058
$\Delta P_{F,e}$	-0.0021
$\Delta P_{g,F}$	-0.0084
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	6.2
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.4
T_g [°C]	655
$T_{10}^{13.0}$ [°C]	659
$T_{10}^{7.6}$ [°C]	742
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.820
ρ [g/cm^3]	4.44
E [10^3 N/mm^2]	124
μ	0.293
K [10^{-6} mm^2/N]	1.41
HK$_{0.1/20}$	770
HG	2
CR	1
FR	1
SR	4
AR	1
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	4.0	5.1	6.1	1.6	2.6	3.6
+20/ +40	4.0	5.3	6.5	2.5	3.7	4.9
+60/ +80	4.2	5.6	6.9	3.0	4.4	5.7