Data Sheet

SCHOTT

N-SF4
755274.315

$n_d = 1.75513$	$\nu_d = 27.38$	$n_F - n_C = 0.027583$
$n_e = 1.76164$	$\nu_e = 27.16$	$n_{F'} - n_{C'} = 0.028044$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.70434
$n_{1970.1}$	1970.1	1.71052
$n_{1529.6}$	1529.6	1.71773
$n_{1060.0}$	1060.0	1.72717
n_t	1014.0	1.72846
n_s	852.1	1.73432
n_r	706.5	1.74286
n_C	656.3	1.74719
$n_{C'}$	643.8	1.74842
$n_{632.8}$	632.8	1.74959
n_D	589.3	1.75489
n_d	587.6	1.75513
n_e	546.1	1.76164
n_F	486.1	1.77477
$n_{F'}$	480.0	1.77647
n_g	435.8	1.79158
n_h	404.7	1.80668
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	1.67780282
B_2	0.282849893
B_3	1.63539276
C_1	0.012679345
C_2	0.0602038419
C_3	145.760496

Constants of Dispersion dn/dT

D_0	$-4.88 \cdot 10^{-6}$
D_1	$6.57 \cdot 10^{-9}$
D_2	$-2.72 \cdot 10^{-11}$
E_0	$9.67 \cdot 10^{-7}$
E_1	$1.48 \cdot 10^{-9}$
λ_{TK} [µm]	0.282

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.776	0.530
2325	0.816	0.602
1970	0.943	0.863
1530	0.992	0.980
1060	0.999	0.999
700	0.994	0.984
660	0.991	0.978
620	0.992	0.979
580	0.993	0.982
546	0.991	0.977
500	0.979	0.948
460	0.961	0.906
436	0.942	0.861
420	0.916	0.802
405	0.861	0.687
400	0.830	0.628
390	0.740	0.471
380	0.563	0.238
370	0.249	0.031
365	0.100	0.003
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	43/36
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2123
$P_{C,s}$	0.4666
$P_{d,C}$	0.2880
$P_{e,d}$	0.2358
$P_{g,F}$	0.6096
$P_{i,h}$	
$P'_{s,t}$	0.2088
$P'_{C',s}$	0.5030
$P'_{d,C'}$	0.2392
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5390
$P'_{i,h}$	

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

$\Delta P_{C,t}$	0.0040
$\Delta P_{C,s}$	-0.0002
$\Delta P_{F,e}$	0.0022
$\Delta P_{g,F}$	0.0118
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.5
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.9
T_g [°C]	570
$T_{10}^{13.0}$ [°C]	559
$T_{10}^{7.6}$ [°C]	661
c_p [J/(g·K)]	0.760
λ [W/(m·K)]	0.950
ρ [g/cm^3]	3.15
E [10^3 N/mm^2]	90
μ	0.256
K [10^{-6} mm^2/N]	2.76
HK$_{0.1/20}$	520
HG	6
CR	1
FR	0
SR	1.3
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	-0.5	1.2	3.5	-2.9	-1.2	1.0
+20/ +40	-0.7	1.4	4.2	-2.2	-0.1	2.6
+60/ +80	-0.8	1.6	4.7	-1.9	0.4	3.5