Data Sheet

SCHOTT

N-SF6
805254.337

$n_d = 1.80518$	$\nu_d = 25.36$	$n_F - n_C = 0.031750$
$n_e = 1.81266$	$\nu_e = 25.16$	$n_{F'} - n_{C'} = 0.032304$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.74895
$n_{1970.1}$	1970.1	1.75541
$n_{1529.6}$	1529.6	1.76307
$n_{1060.0}$	1060.0	1.77341
n_t	1014.0	1.77486
n_s	852.1	1.78144
n_r	706.5	1.79114
n_C	656.3	1.79608
$n_{C'}$	643.8	1.79749
$n_{632.8}$	632.8	1.79883
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81266
n_F	486.1	1.82783
$n_{F'}$	480.0	1.82980
n_g	435.8	1.84738
n_h	404.7	1.86506
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	1.77931763
B_2	0.338149866
B_3	2.08734474
C_1	0.0133714182
C_2	0.0617533621
C_3	174.01759

Constants of Dispersion dn/dT

D_0	$-4.93 \cdot 10^{-6}$
D_1	$7.02 \cdot 10^{-9}$
D_2	$-2.40 \cdot 10^{-11}$
E_0	$9.84 \cdot 10^{-7}$
E_1	$1.54 \cdot 10^{-9}$
λ_{TK} [µm]	0.29

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.776	0.530
2325	0.810	0.590
1970	0.941	0.860
1530	0.991	0.978
1060	0.998	0.996
700	0.993	0.983
660	0.990	0.976
620	0.991	0.978
580	0.992	0.980
546	0.989	0.972
500	0.977	0.943
460	0.961	0.905
436	0.946	0.870
420	0.919	0.810
405	0.857	0.680
400	0.821	0.610
390	0.700	0.410
380	0.480	0.160
370	0.158	0.010
365	0.004	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	45/37
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2074
$P_{C,s}$	0.4610
$P_{d,C}$	0.2867
$P_{e,d}$	0.2356
$P_{g,F}$	0.6158
$P_{i,h}$	
$P'_{s,t}$	0.2039
$P'_{C',s}$	0.4969
$P'_{d,C'}$	0.2380
$P'_{e,d}$	0.2315
$P'_{g,F'}$	0.5443
$P'_{i,h}$	

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

$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	-0.0010
$\Delta P_{F,e}$	0.0027
$\Delta P_{g,F}$	0.0146
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	10.3
T_g [°C]	589
$T_{10}^{13.0}$ [°C]	590
$T_{10}^{7.6}$ [°C]	683
c_p [J/(g·K)]	0.690
λ [W/(m·K)]	0.960
ρ [g/cm^3]	3.37
E [10^3 N/mm^2]	93
μ	0.262
K [10^{-6} mm^2/N]	2.82
HK$_{0.1/20}$	550
HG	4
CR	1
FR	0
SR	2
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	-0.7	1.2	3.9	-3.0	-1.2	1.3
+20/ +40	-0.8	1.5	4.8	-2.3	0.0	3.1
+60/ +80	-0.8	1.8	5.4	-2.0	0.6	4.1