Data Sheet

SCHOTT

SF6
805254.518

n_d = 1.80518	ν_d = 25.43	$n_F - n_C$ = 0.031660
n_e = 1.81265	ν_e = 25.24	$n_{F'} - n_{C'}$ = 0.032201

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.75302
$n_{1970.1}$	1970.1	1.75813
$n_{1529.6}$	1529.6	1.76444
$n_{1060.0}$	1060.0	1.77380
n_t	1014.0	1.77517
n_s	852.1	1.78157
n_r	706.5	1.79117
n_C	656.3	1.79609
$n_{C'}$	643.8	1.79750
$n_{632.8}$	632.8	1.79884
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81265
n_F	486.1	1.82775
$n_{F'}$	480.0	1.82970
n_g	435.8	1.84707
n_h	404.7	1.86436
n_i	365.0	1.89703
$n_{334.1}$	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	1.72448482
B_2	0.390104889
B_3	1.04572858
C_1	0.0134871947
C_2	0.0569318095
C_3	118.557185

Constants of Dispersion dn/dT

D_0	$6.69 \cdot 10^{-6}$
D_1	$1.78 \cdot 10^{-8}$
D_2	$-3.36 \cdot 10^{-11}$
E_0	$1.77 \cdot 10^{-6}$
E_1	$1.70 \cdot 10^{-9}$
λ_{TK} [µm]	0.269

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.887	0.740
2325	0.910	0.790
1970	0.971	0.930
1530	0.996	0.991
1060	0.999	0.999
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.999	0.996
546	0.998	0.996
500	0.996	0.991
460	0.991	0.978
436	0.982	0.955
420	0.967	0.920
405	0.933	0.840
400	0.915	0.800
390	0.847	0.660
380	0.720	0.440
370	0.442	0.130
365	0.246	0.030
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	42/36
(*= λ_{70}/λ_5)	

Remarks

lead containing glass type

Relative Partial Dispersion

$P_{s,t}$	0.2020
$P_{C,s}$	0.4588
$P_{d,C}$	0.2871
$P_{e,d}$	0.2359
$P_{g,F}$	0.6102
$P_{i,h}$	1.0316
$P'_{s,t}$	0.1986
$P'_{C',s}$	0.4950
$P'_{d,C'}$	0.2384
$P'_{e,d}$	0.2319
$P'_{g,F'}$	0.5393
$P'_{i,h}$	1.0143

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

$\Delta P_{C,t}$	-0.0048
$\Delta P_{C,s}$	-0.0033
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0092
$\Delta P_{i,g}$	0.0669

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.1
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.0
T_g [°C]	423
$T_{10}^{13.0}$ [°C]	410
$T_{10}^{7.6}$ [°C]	538
c_p [J/(g·K)]	0.389
λ [W/(m·K)]	0.673
ρ [g/cm^3]	5.18
E [10^3 N/mm^2]	55
μ	0.244
K [10^{-6} mm^2/N]	0.65
$HK_{0.1/20}$	370
HG	1
B	0
CR	2
FR	3
SR	51.3
AR	2.3
PR	3.3

Temperature Coefficients of Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [10^{-6}/K]			$\Delta n_{abs}/\Delta T$ [10^{-6}/K]		
	1060.0	e	g	1060.0	e	g
-40/ -20	6.1	9.9	14.5	3.7	7.4	11.9
+20/ +40	6.8	11.1	16.2	5.3	9.5	14.6
+60/ +80	7.3	11.8	17.4	6.1	10.6	16.1