Data Sheet

SCHOTT

N-BAF51
652450.333

$n_d = 1.65224$	$\nu_d = 44.96$	$n_F - n_C = 0.014507$
$n_e = 1.65569$	$\nu_e = 44.67$	$n_{F'} - n_{C'} = 0.014677$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.61873
$n_{1970.1}$	1970.1	1.62390
$n_{1529.6}$	1529.6	1.62961
$n_{1060.0}$	1060.0	1.63619
n_t	1014.0	1.63701
n_s	852.1	1.64059
n_r	706.5	1.64551
n_C	656.3	1.64792
$n_{C'}$	643.8	1.64860
$n_{632.8}$	632.8	1.64924
n_D	589.3	1.65211
n_d	587.6	1.65224
n_e	546.1	1.65569
n_F	486.1	1.66243
$n_{F'}$	480.0	1.66328
n_g	435.8	1.67065
n_h	404.7	1.67766
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	1.51503623
B_2	0.153621958
B_3	1.15427909
C_1	0.00942734715
C_2	0.04308265
C_3	124.889868

Constants of Dispersion dn/dT

D_0	$-2.84 \cdot 10^{-7}$
D_1	$1.04 \cdot 10^{-8}$
D_2	$-1.80 \cdot 10^{-11}$
E_0	$7.01 \cdot 10^{-7}$
E_1	$8.47 \cdot 10^{-10}$
λ_{TK} [µm]	0.219

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.746	0.480
2325	0.831	0.630
1970	0.946	0.870
1530	0.992	0.980
1060	0.997	0.993
700	0.997	0.993
660	0.996	0.990
620	0.996	0.990
580	0.997	0.992
546	0.996	0.991
500	0.994	0.985
460	0.988	0.970
436	0.982	0.956
420	0.976	0.940
405	0.963	0.910
400	0.954	0.890
390	0.924	0.820
380	0.862	0.690
370	0.739	0.470
365	0.642	0.330
350	0.209	0.020
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	39/34
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2463
$P_{C,s}$	0.5055
$P_{d,C}$	0.2977
$P_{e,d}$	0.2376
$P_{g,F}$	0.5670
$P_{i,h}$	
$P'_{s,t}$	0.2435
$P'_{C',s}$	0.5460
$P'_{d,C'}$	0.2479
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5024
$P'_{i,h}$	

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

$\Delta P_{C,t}$	-0.0064
$\Delta P_{C,s}$	-0.0022
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0012
$\Delta P_{i,g}$	

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.4
$\alpha_{+20/+300°C}$ [10^{-6}/K]	9.5
T_g [°C]	569
$T_{10^{13.0}}$ [°C]	574
$T_{10^{7.6}}$ [°C]	712
c_p [J/(g·K)]	0.840
λ [W/(m·K)]	0.670
ρ [g/cm³]	3.33
E [10^3 N/mm²]	91
μ	0.262
K [10^{-6} mm²/N]	2.22
HK $_{0.1/20}$	560
HG	5
CR	2
FR	0
SR	5.4
AR	1.3
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	1.7	2.8	3.8	-0.5	0.5	1.5
+20/ +40	1.7	2.9	4.1	0.3	1.5	2.7
+60/ +80	1.8	3.1	4.4	0.7	2.0	3.3