Data Sheet

SCHOTT

N-BAK4
569560.305

$n_d = 1.56883$	$\nu_d = 55.98$	$n_F - n_C = 0.010162$
$n_e = 1.57125$	$\nu_e = 55.70$	$n_{F'} - n_{C'} = 0.010255$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.54044
$n_{1970.1}$	1970.1	1.54561
$n_{1529.6}$	1529.6	1.55111
$n_{1060.0}$	1060.0	1.55688
n_t	1014.0	1.55755
n_s	852.1	1.56034
n_r	706.5	1.56400
n_C	656.3	1.56575
$n_{C'}$	643.8	1.56624
$n_{632.8}$	632.8	1.56670
n_D	589.3	1.56874
n_d	587.6	1.56883
n_e	546.1	1.57125
n_F	486.1	1.57591
$n_{F'}$	480.0	1.57649
n_g	435.8	1.58149
n_h	404.7	1.58614
n_i	365.0	1.59415
$n_{334.1}$	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	1.28834642
B_2	0.132817724
B_3	0.945395373
C_1	0.00779980626
C_2	0.0315631177
C_3	105.965875

Constants of Dispersion dn/dT

D_0	$3.06 \cdot 10^{-6}$
D_1	$1.44 \cdot 10^{-8}$
D_2	$-2.23 \cdot 10^{-11}$
E_0	$5.46 \cdot 10^{-7}$
E_1	$6.05 \cdot 10^{-10}$
λ_{TK} [µm]	0.189

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.782	0.540
2325	0.872	0.710
1970	0.959	0.900
1530	0.993	0.982
1060	0.998	0.995
700	0.999	0.997
660	0.998	0.995
620	0.998	0.995
580	0.998	0.996
546	0.998	0.996
500	0.998	0.994
460	0.996	0.989
436	0.995	0.988
420	0.995	0.987
405	0.993	0.983
400	0.992	0.980
390	0.987	0.967
380	0.976	0.940
370	0.954	0.890
365	0.933	0.840
350	0.787	0.550
334	0.345	0.070
320	0.012	
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	36/33
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.2749
$P_{C,s}$	0.5321
$P_{d,C}$	0.3029
$P_{e,d}$	0.2383
$P_{g,F}$	0.5487
$P_{i,h}$	0.7879
$P'_{s,t}$	0.2724
$P'_{C',s}$	0.5750
$P'_{d,C'}$	0.2524
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4869
$P'_{i,h}$	0.7807

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

$\Delta P_{C,t}$	-0.0034
$\Delta P_{C,s}$	-0.0013
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0087

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	7.9
T_g [°C]	581
$T_{10}^{13.0}$ [°C]	569
$T_{10}^{7.6}$ [°C]	725
c_p [J/(g·K)]	0.680
λ [W/(m·K)]	0.880
ρ [g/cm^3]	3.05
E [10^3 N/mm^2]	77
μ	0.240
K [10^{-6} mm^2/N]	2.90
HK$_{0.1/20}$	550
HG	2
CR	1
FR	0
SR	1.2
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	3.0	3.7	4.4	0.9	1.5	2.2
+20/ +40	3.1	3.9	4.7	1.8	2.6	3.3
+60/ +80	3.3	4.2	5.0	2.2	3.1	3.9