Data Sheet

SCHOTT

N-BAK4HT
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	0.854	0.673
2325	0.920	0.811
1970	0.979	0.949
1530	0.996	0.991
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.996
620	0.998	0.996
580	0.998	0.996
546	0.998	0.996
500	0.998	0.995
460	0.997	0.993
436	0.997	0.992
420	0.996	0.991
405	0.994	0.985
400	0.993	0.983
390	0.989	0.972
380	0.979	0.949
370	0.959	0.900
365	0.941	0.859
350	0.812	0.595
334	0.390	0.095
320	0.015	
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