Data Sheet

SCHOTT

N-BK10
498670.239

$n_d = 1.49782$	$\nu_d = 66.95$	$n_F - n_C = 0.007435$
$n_e = 1.49960$	$\nu_e = 66.78$	$n_{F'} - n_{C'} = 0.007481$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.47060
$n_{1970.1}$	1970.1	1.47647
$n_{1529.6}$	1529.6	1.48252
$n_{1060.0}$	1060.0	1.48827
n_t	1014.0	1.48887
n_s	852.1	1.49127
n_r	706.5	1.49419
n_C	656.3	1.49552
$n_{C'}$	643.8	1.49589
$n_{632.8}$	632.8	1.49623
n_D	589.3	1.49775
n_d	587.6	1.49782
n_e	546.1	1.49960
n_F	486.1	1.50296
$n_{F'}$	480.0	1.50337
n_g	435.8	1.50690
n_h	404.7	1.51014
n_i	365.0	1.51561
$n_{334.1}$	334.1	1.52144
$n_{312.6}$	312.6	1.52674
$n_{296.7}$	296.7	1.53151
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	0.888308131
B_2	0.328964475
B_3	0.984610769
C_1	0.00516900822
C_2	0.0161190045
C_3	99.7575331

Constants of Dispersion dn/dT

D_0	$3.32 \cdot 10^{-6}$
D_1	$1.72 \cdot 10^{-8}$
D_2	$-2.05 \cdot 10^{-11}$
E_0	$3.57 \cdot 10^{-7}$
E_1	$3.90 \cdot 10^{-10}$
λ_{TK} [µm]	0.169

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.739	0.470
2325	0.872	0.710
1970	0.980	0.950
1530	0.992	0.980
1060	0.998	0.996
700	0.998	0.995
660	0.997	0.993
620	0.997	0.992
580	0.997	0.993
546	0.997	0.993
500	0.996	0.991
460	0.996	0.990
436	0.996	0.989
420	0.996	0.989
405	0.996	0.990
400	0.996	0.990
390	0.996	0.989
380	0.994	0.985
370	0.994	0.986
365	0.994	0.986
350	0.991	0.978
334	0.978	0.947
320	0.941	0.860
310	0.872	0.710
300	0.707	0.420
290	0.414	0.110
280	0.123	
270	0.010	
260		
250		

Color Code

λ_{80}/λ_5	31/27
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion

$P_{s,t}$	0.3224
$P_{C,s}$	0.5716
$P_{d,C}$	0.3093
$P_{e,d}$	0.2387
$P_{g,F}$	0.5303
$P_{i,h}$	0.7360
$P'_{s,t}$	0.3204
$P'_{C',s}$	0.6174
$P'_{d,C'}$	0.2580
$P'_{e,d}$	0.2373
$P'_{g,F'}$	0.4716
$P'_{i,h}$	0.7315

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

$\Delta P_{C,t}$	0.0314
$\Delta P_{C,s}$	0.0126
$\Delta P_{F,e}$	-0.0012
$\Delta P_{g,F}$	-0.0008
$\Delta P_{i,g}$	0.0091

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	5.8
$\alpha_{+20/+300°C}$ [10^{-6}/K]	6.6
T_g [°C]	551
$T_{10}^{13.0}$ [°C]	0
$T_{10}^{7.6}$ [°C]	753
c_p [J/(g·K)]	0.810
λ [W/(m·K)]	1.320
ρ [g/cm^3]	2.39
E [10^3 N/mm^2]	71
μ	0.203
K [10^{-6} mm^2/N]	3.21
HK$_{0.1/20}$	560
HG	4
CR	1
FR	0
SR	1
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	2.7	3.1	3.5	0.7	1.1	1.4
+20/ +40	2.9	3.4	3.8	1.6	2.1	2.5
+60/ +80	3.1	3.7	4.1	2.1	2.6	3.1