Data Sheet

SCHOTT

BK7G18
520636.252

$n_d = 1.51975$	$\nu_d = 63.58$	$n_F - n_C = 0.008174$
$n_e = 1.52170$	$\nu_e = 63.36$	$n_{F'} - n_{C'} = 0.008233$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.49203
$n_{1970.1}$	1970.1	1.49777
$n_{1529.6}$	1529.6	1.50373
$n_{1060.0}$	1060.0	1.50953
n_t	1014.0	1.51015
n_s	852.1	1.51267
n_r	706.5	1.51579
n_C	656.3	1.51724
$n_{C'}$	643.8	1.51764
$n_{632.8}$	632.8	1.51802
n_D	589.3	1.51968
n_d	587.6	1.51975
n_e	546.1	1.52170
n_F	486.1	1.52541
$n_{F'}$	480.0	1.52587
n_g	435.8	1.52981
n_h	404.7	1.53345
n_i	365.0	1.53970
$n_{334.1}$	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	1.26538542
B_2	0.0144191073
B_3	1.00323028
C_1	0.00813104078
C_2	0.0543303226
C_3	102.821166

Constants of Dispersion dn/dT

D_0	$1.52 \cdot 10^{-6}$
D_1	$1.37 \cdot 10^{-8}$
D_2	$-1.26 \cdot 10^{-11}$
E_0	$4.36 \cdot 10^{-7}$
E_1	$4.17 \cdot 10^{-10}$
λ_{TK} [µm]	0.194

Internal Transmittance τ_i

λ [nm]	τ_i (10mm)	τ_i (25mm)
2500	0.634	0.320
2325	0.782	0.540
1970	0.933	0.841
1530	0.992	0.979
1060	0.999	0.998
700	0.997	0.993
660	0.995	0.988
620	0.994	0.984
580	0.992	0.979
546	0.989	0.973
500	0.982	0.957
460	0.970	0.927
436	0.947	0.873
420	0.905	0.780
405	0.815	0.600
400	0.764	0.510
390	0.601	0.280
380	0.360	0.080
370	0.080	
365	0.020	
350		
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80}/λ_5	41/37
(*= λ_{70}/λ_5)	

Remarks

radiation resistant glass

Relative Partial Dispersion

$P_{s,t}$	0.3077
$P_{C,s}$	0.5591
$P_{d,C}$	0.3071
$P_{e,d}$	0.2385
$P_{g,F}$	0.5376
$P_{i,h}$	0.7640
$P'_{s,t}$	0.3055
$P'_{C',s}$	0.6040
$P'_{d,C'}$	0.2561
$P'_{e,d}$	0.2368
$P'_{g,F'}$	0.4777
$P'_{i,h}$	0.7585

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

$\Delta P_{C,t}$	0.0203
$\Delta P_{C,s}$	0.0080
$\Delta P_{F,e}$	-0.0006
$\Delta P_{g,F}$	0.0007
$\Delta P_{i,g}$	0.0189

Other Properties

$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.0
$\alpha_{+20/+300°C}$ [10^{-6}/K]	8.2
T_g [°C]	585
$T_{10}^{13.0}$ [°C]	570
$T_{10}^{7.6}$ [°C]	722
c_p [J/(g·K)]	0.820
λ [W/(m·K)]	1.190
ρ [g/cm^3]	2.52
E [10^3 N/mm^2]	82
µ	0.205
K [10^{-6} mm^2/N]	2.77
HK$_{0.1/20}$	580
HG	
CR	
FR	0
SR	1
AR	2
PR	0

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	2.2	2.7	3.3	0.2	0.7	1.2
+20/ +40	2.2	2.8	3.4	0.9	1.5	2.1
+60/ +80	2.4	3.0	3.7	1.4	2.0	2.6