



DATA SHEET

SCHOTT BK7

BK7 517642	$n_d = 1.51680$	$v_d = 64.17$	$n_F - n_C = 0.008054$
	$n_e = 1.51872$	$v_e = 63.96$	$n_F' - n_C' = 0.008110$

Refractive Indices		
	λ (nm)	
$n_{2325.4}$	2325.4	1.48921
$n_{1970.1}$	1970.1	1.49495
$n_{1529.6}$	1529.6	1.50091
$n_{1060.0}$	1060.0	1.50669
n_t	1014.0	1.50731
n_s	852.1	1.50980
n_r	706.5	1.51289
n_C	656.3	1.51432
$n_{C'}$	643.8	1.51472
$n_{632.8}$	632.8	1.51509
n_D	589.3	1.51673
n_d	587.6	1.51680
n_e	546.1	1.51872
n_F	486.1	1.52238
$n_{F'}$	480.0	1.52283
n_g	435.8	1.52668
n_h	404.7	1.53024
n_i	365.0	1.53627
$n_{334.1}$	334.1	1.54272
$n_{312.6}$	312.6	1.54862
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Internal Transmittance τ_i			
λ (nm)	τ_i (5 mm)	τ_i (25 mm)	
2500.0			
2325.4	0.89	0.57	
1970.1	0.968	0.85	
1529.6	0.997	0.985	
1060.0	0.999	0.998	
700	0.999	0.998	
660	0.999	0.997	
620	0.999	0.997	
580	0.999	0.996	
546.1	0.999	0.996	
500	0.999	0.996	
460	0.999	0.994	
435.8	0.999	0.994	
420	0.998	0.993	
404.7	0.998	0.993	
400	0.998	0.991	
390	0.998	0.989	
380	0.996	0.980	
370	0.995	0.974	
365.0	0.994	0.969	
350	0.986	0.93	
334.1	0.950	0.77	
320	0.81	0.35	
310	0.59	0.07	
300	0.26		
290			
280			
270			
260			
250			

Relative Partial Dispersion	
$P_{s,l}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{e,d}$	0.2386
$P_{g,F}$	0.5349
$P_{i,h}$	0.7483
$P'_{s,l}$	0.3076
$P'_{C,s}$	0.6062
$P'_{d,C'}$	0.2566
$P'_{e,d}$	0.2370
$P'_{g,F'}$	0.4754
$P'_{i,h}$	0.7432

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"	
$\Delta P_{C,l}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0036

Constants of Dispersion Formula	
B_1	1.03961212
B_2	$2.31792344 \cdot 10^{-1}$
B_3	1.01046945
C_1	$6.00069867 \cdot 10^{-3}$
C_2	$2.00179144 \cdot 10^{-2}$
C_3	$1.03560653 \cdot 10^2$

Constants of Formula for dn/dT	
D_0	$1.86 \cdot 10^{-6}$
D_1	$1.31 \cdot 10^{-8}$
D_2	$-1.37 \cdot 10^{-11}$
E_0	$4.34 \cdot 10^{-7}$
E_1	$6.27 \cdot 10^{-10}$
$\lambda_{TK} [\mu m]$	0.170

Color Code	
λ_{80}/λ_5	33/30

Remarks	

Other Properties	
$\alpha_{-30/+70^\circ C} [10^{-6}/K]$	7.1
$\alpha_{20/300^\circ C} [10^{-6}/K]$	8.3
$T_g [^\circ C]$	557
$T_{10/13.0} [^\circ C]$	557
$T_{10/7.6} [^\circ C]$	719
$c_p [J/(g \cdot K)]$	0.858
$\lambda [W/(m \cdot K)]$	1.114

$\rho [g/cm^3]$	2.51
$E [10^3 N/mm^2]$	82
μ	0.206
$K [10^{-6} mm^2/N]$	2.77
$HK_{0.1/20}$	610
B	0
CR	2
FR	0
SR	1
AR	2.0
PR	2.3

Temperature Coefficients of Refractive Index						
[$^\circ C$]	$\Delta n_{rel} / \Delta T [10^{-6}/K]$			$\Delta n_{abs} / \Delta T [10^{-6}/K]$		
	1060.0	e	g	1060.0	e	g
-40/-20	2.4	2.9	3.3	0.3	0.8	1.2
+20/+40	2.4	3.0	3.5	1.1	1.6	2.1
+60/+80	2.5	3.1	3.7	1.5	2.1	2.7

WHILE EVERY ATTEMPT HAS BEEN MADE TO VERIFY THE SOURCE OF THE INFORMATION, NO RESPONSIBILITY IS ACCEPTED FOR ACCURACY OF DATA.

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