



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		
	$\lambda$ [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
$n_i$	1014.0	1.50731
$n_s$	852.1	1.50980
$n_r$	708.5	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
$n_{286.7}$	286.7	
$n_{260.4}$	260.4	
$n_{248.3}$	248.3	

Internal Transmittance $\tau_i$		
$\lambda$ [nm]	$\tau_i$ (5 mm)	$\tau_i$ (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	0.998	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	
$P_{s1}$	0.3098
$P_{C,s}$	0.5612
$P_{d,C}$	0.3076
$P_{s,d}$	0.2386
$P_{d,F}$	0.5349
$P_{i,h}$	0.7483
$P'_{s1}$	0.3078
$P'_{C,s}$	0.6082
$P'_{d,C}$	0.2566
$P'_{s,d}$	0.2370
$P'_{d,F}$	0.4754
$P'_{i,h}$	0.7432

Deviation of Relative Partial Dispersions $\Delta P$ from the "Normal Line"	
$\Delta P_{C2}$	0.0216
$\Delta P_{C3}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{d,F}$	-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
$C_1$	$6.00069867 \cdot 10^{-3}$
$C_2$	$2.00179144 \cdot 10^{-2}$
$C_3$	$1.03560653 \cdot 10^2$

Other Properties	
$\alpha_{-30/+70} [10^{-6}/K]$	7.1
$\alpha_{20/300-C} [10^{-6}/K]$	8.3
$T_g [^\circ C]$	557
$T_{10130} [^\circ C]$	557
$T_{1078} [^\circ C]$	719
$c_0 [J/(g \cdot K)]$	0.858
$\lambda [W/(m \cdot K)]$	1.114

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	
$\lambda_{80}/\lambda_5$	33/30
Remarks	

$\rho [g/cm^3]$	2.51
$E [10^9 N/mm^2]$	82
$\mu$	0.206
$K [10^6 mm^2/N]$	2.77
$HK_{0.050}$	610
<b>B</b>	0
<b>CR</b>	2
<b>FR</b>	0
<b>SR</b>	1
<b>AR</b>	2.0
<b>PR</b>	2.3

[°C]	$\Delta n_{ed} / \Delta T [10^{-6}/K]$			$\Delta n_{gd} / \Delta T [10^{-6}/K]$		
	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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