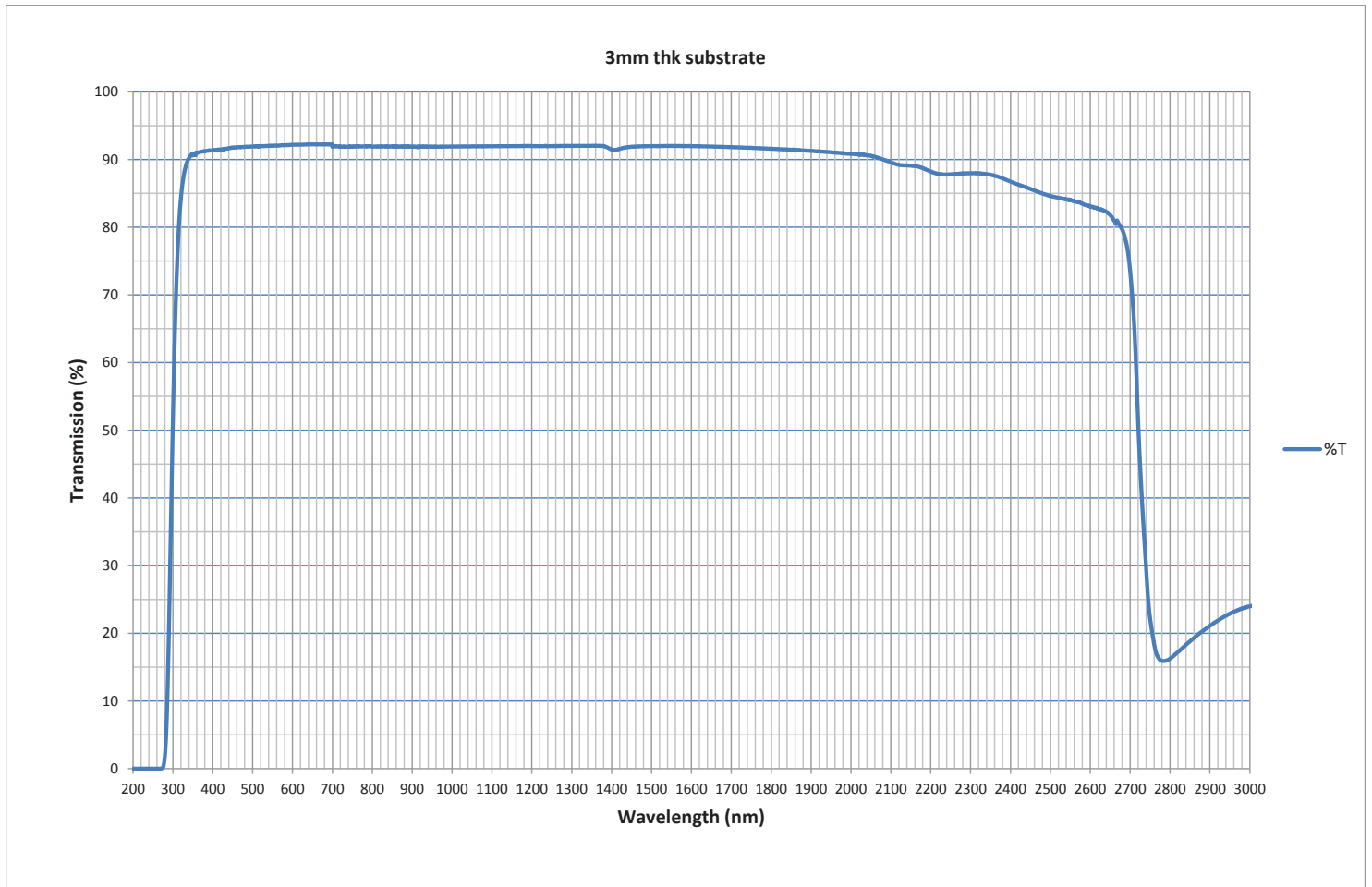


# OPTICAL GLASSES : VISIBLE - NEAR INFRA-RED

**Title:** Optical Glasses - 250-2500nm

**Material/Specification:** Schott BK7 for 250nm - 2500nm transmission

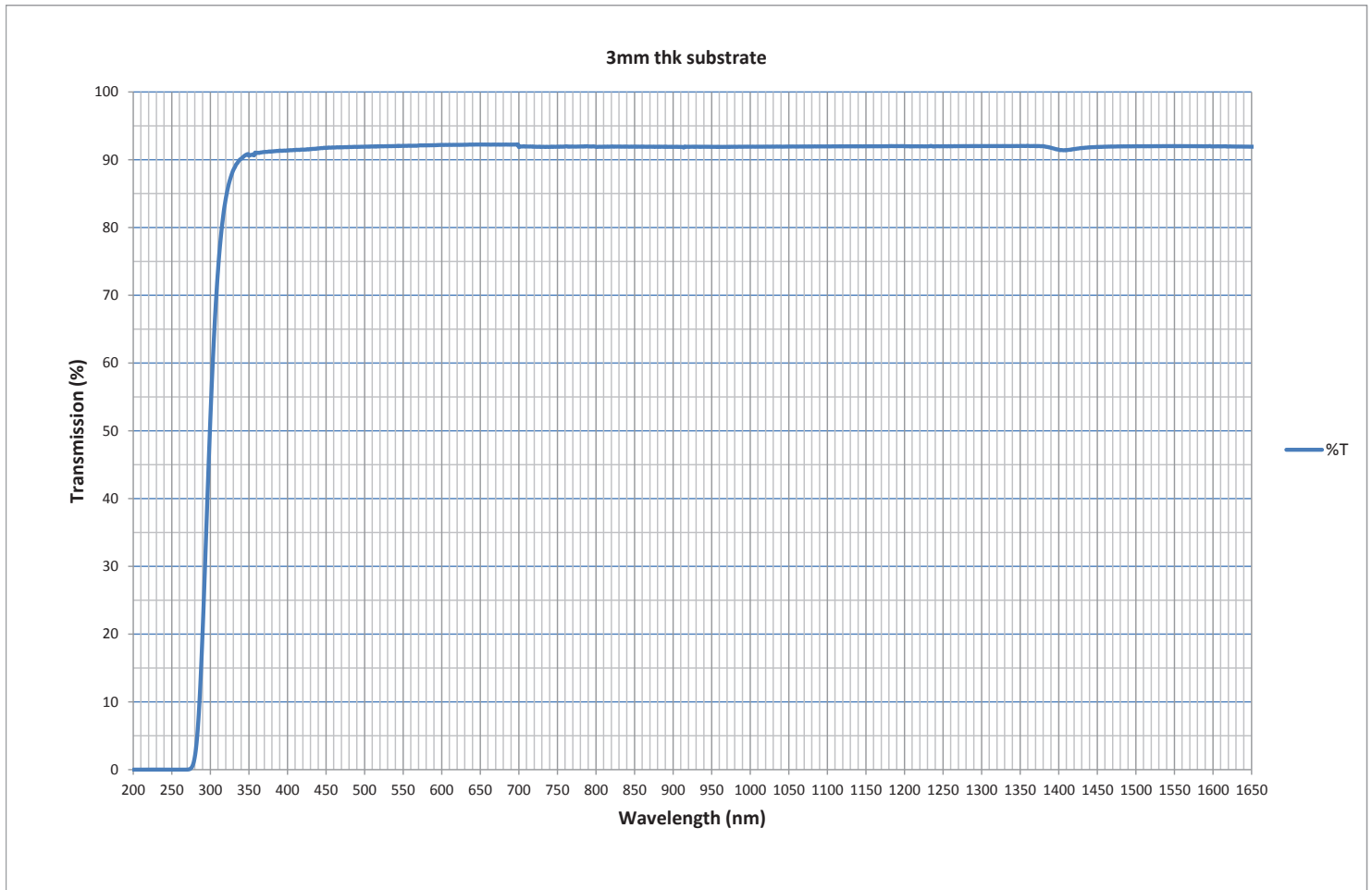
**Range/Description:** OPG-BK7



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**SCHOTT**  
glass made of ideas

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
$n_t$	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 $\tau_t$		
$\lambda$ [nm]	$\tau_t$ [10 mm]	$\tau_t$ [25 mm]
2500	0.67	0.36
2325	0.79	0.56
1970	0.930	0.84
1530	0.992	0.980
1060	0.999	0.997
700	0.998	0.996
660	0.998	0.994
620	0.998	0.994
580	0.998	0.995
546	0.998	0.996
500	0.998	0.994
460	0.997	0.993
436	0.997	0.992
420	0.997	0.993
405	0.997	0.993
400	0.997	0.992
390	0.996	0.989
380	0.993	0.983
370	0.991	0.977
365	0.988	0.971
350	0.967	0.920
334	0.910	0.78
320	0.77	0.52
310	0.57	0.25
300	0.29	0.05
290	0.06	
280		
270		
260		
250		

Relative Partial Dispersion	
$P_{s,t}$	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
$P'_{s,t}$	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 Rel. Partial Dispersion $\Delta P$ from "Normal Line"	
$\Delta P_{C,t}$	0.0216
$\Delta P_{C,s}$	0.0087
$\Delta P_{F,e}$	-0.0009
$\Delta P_{g,F}$	-0.0009
$\Delta P_{i,g}$	0.0035

Constants of Dispersion Formula	
$B_1$	$1.03961212 \cdot 10^{+00}$
$B_2$	$2.31792344 \cdot 10^{-01}$
$B_3$	$1.01046945 \cdot 10^{+00}$
$C_1$	$6.00069867 \cdot 10^{-03}$
$C_2$	$2.00179144 \cdot 10^{-02}$
$C_3$	$1.03560653 \cdot 10^{+02}$

Constants of Formula $dn/dT$	
$D_0$	$1.86 \cdot 10^{-06}$
$D_1$	$1.31 \cdot 10^{-08}$
$D_2$	$-1.37 \cdot 10^{-11}$
$E_0$	$4.34 \cdot 10^{-07}$
$E_1$	$6.27 \cdot 10^{-10}$
$\lambda_{TK}[\mu m]$	0.170

Color Code	
$\lambda_{80}/\lambda_5$	33/29
Remarks	

Temperature Coefficients of Refractive Index						
[°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

Other Properties	
$\alpha_{-30/+70} [10^{-6}/K]$	7.1
$\alpha_{+20/+300} [10^{-6}/K]$	8.3
$T_g [°C]$	557
$T_{10}^{13.0} [°C]$	557
$T_{10}^{7.6} [°C]$	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
$\mu$	0.206
$K [10^{-6} mm^2/N]$	2.77
$HK_{0.1/20}$	610
HG	3
B	0
CR	2
FR	0
SR	1
AR	2
PR	2.3

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