

VIS 抛光 B270 硼硅酸盐冠状玻璃窗片 0.35-2.5um (25.4mmX1.0mm 圆形窗口片)



产品描述

BK7 (N-BK7) 或 B270 或 Pyrex Optical Crown Glass 硼硅酸盐冠状光学玻璃,其中 N-BK7 是由 Schott 设计用于多种可见光应用的最常见的硼硅酸盐冠状玻璃。 这里的基本数据给出了 N-BK7。

产品型号

B270P25.4-1

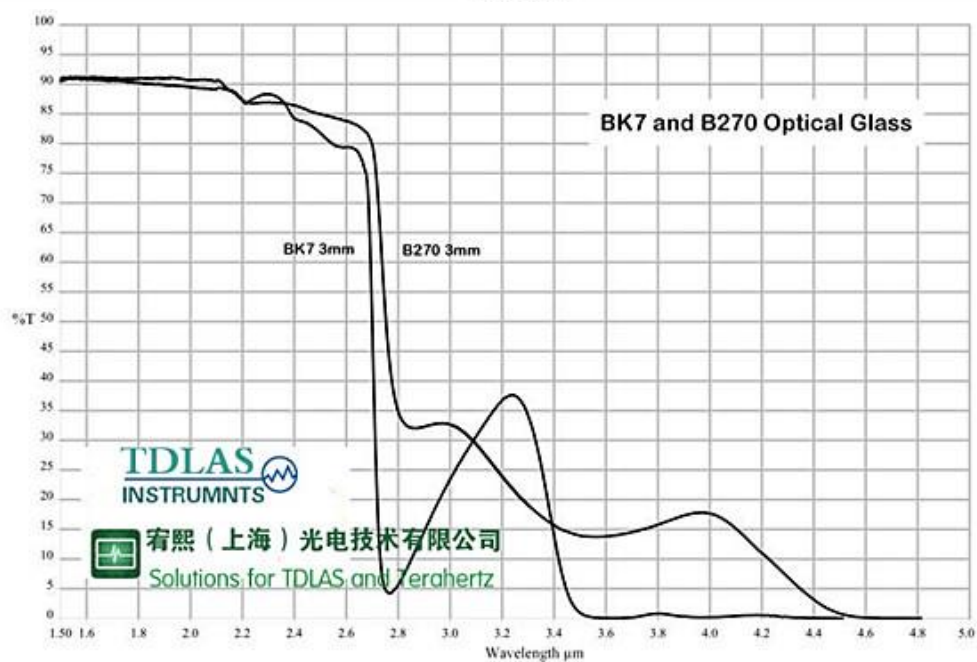
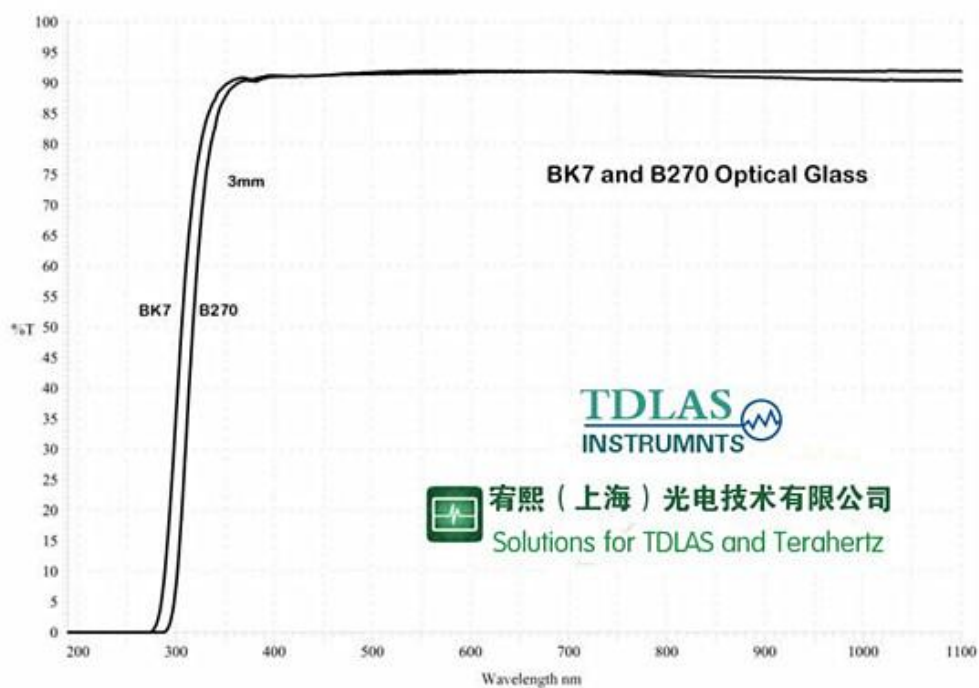
核心参数

工作波长	规格尺寸
0.35-2.5um	25.4mmX1.0mm

详细参数

透射范围:	350nm 至 2.5μm
折射率:	1.51680 @ 587.5618nm (黄氦线)
反射损耗:	8.1% at 587.5618nm (2 个表面)
吸收系数:	-
吸收峰:	-
dn / dT:	见 Schott 表
dn / dμ = 0:	-
密度:	2.51
熔点:	557°C
导热系数:	1.114 W m ⁻¹ K ⁻¹
热膨胀:	7.1×10 ⁻⁶ K ⁻¹
硬度:	Knoop 610
比热容:	858JKg ⁻¹ K ⁻¹
介电常数:	n / a
杨氏模量 (E) :	82GPa
剪切模量 (G) :	n / a
体积模量 (K) :	34GPa
弹性系数:	n / a
表观弹性极限:	63.5MPa (9206psi)

泊松比:	0.206
溶解性:	不溶于水
分子量:	n / a
类别/结构:	非晶玻璃



Data Sheet

N-BK7
517642.251

$n_d = 1.51680$ $v_d = 64.17$ $n_f - n_c = 0.008054$
 $n_e = 1.51872$ $v_e = 63.96$ $n_f - n_c = 0.008110$

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
$n_{643.8}$	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_j	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	

Constants of Dispersion Formula	
B_1	1.03961212
B_2	0.231792344
B_3	1.01046945
C_1	0.00600069867
C_2	0.0200179144
C_3	103.560653

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

Temperature Coefficients of Refractive Index						
	$\Delta n_{ne}/\Delta T [10^{-6}/K]$			$\Delta n_{ge}/\Delta T [10^{-6}/K]$		
[°C]	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

Internal Transmittance τ_l		
λ [nm]	τ_l (10mm)	τ_l (25mm)
2500	0.67	0.36
2325	0.79	0.56
1970	0.933	0.840
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	0.905	0.780
320	0.770	0.520
310	0.574	0.250
300	0.290	0.050
290	0.060	
280		
270		
260		
250		

Color Code	
λ_{80}/λ_5	33/29
(*= λ_{70}/λ_5)	

Remarks

Relative Partial Dispersion	
P_{dt}	0.3098
P_{cs}	0.5612
P_{dC}	0.3076
$P_{e,d}$	0.2386
P_{qf}	0.5349
P_{lh}	0.7483
P'_{dt}	0.3076
$P'_{cs,s}$	0.6062
P'_{dC}	0.2566
$P'_{e,d}$	0.2370
P'_{qf}	0.4754
P'_{lh}	0.7432

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"	
ΔP_{dt}	0.0216
ΔP_{cs}	0.0087
$\Delta P_{e,d}$	-0.0009
ΔP_{qf}	-0.0009
ΔP_{lh}	0.0035

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
$\rho [g/cm^3]$	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
HG	3
B	0.00
CR	2
FR	0
SR	1
AR	2
PR	2.3

As of 09/03/2001 Subject to change

订购信息

订购型号	规格(D×L)(mm)	材质	S/D	材料等级
BK7P10-2	10.0mm×2.0mm	BK7	60/40	VIS
B270P25.4-1	25.4mm×1.0mm	B270	60/40	VIS
BK7P25.4-1	25.4mm×1.0mm	N-BK7	60/40	VIS
B270P32-3	32.0mm×3.0mm	B270	60/40	VIS
BK7P34-26-2	34mm x 26mm x 2mm	N-BK7	60/40	VIS