



## VIS 抛光 BK7 硼硅酸盐冠状玻璃窗片 0.35-2.5um (10.0mmX2.0mm 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

BK7P10-2

### 核心参数

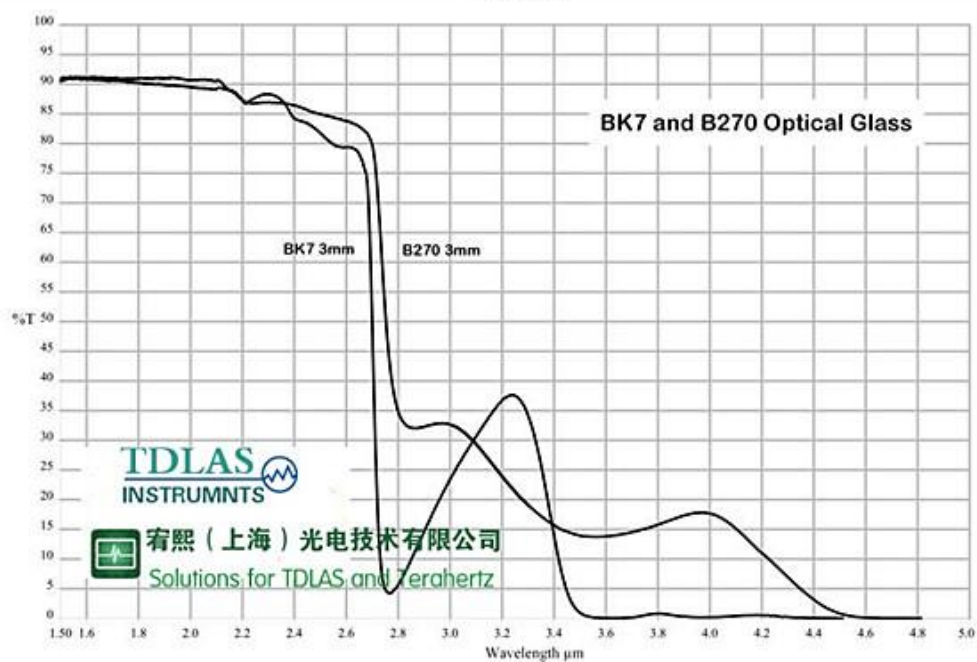
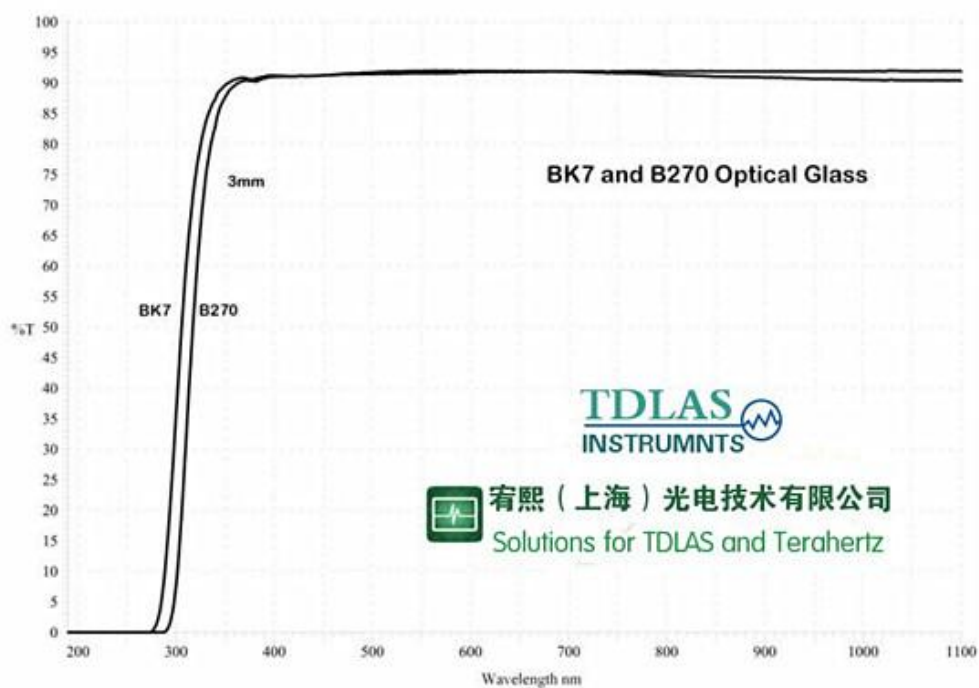
| 工作波长       | 规格尺寸         |
|------------|--------------|
| 0.35-2.5um | 10.0mmX2.0mm |



## 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 <sup>-1</sup> K <sup>-1</sup> |
| 热膨胀:         | 7.1×10 <sup>-6</sup> K <sup>-1</sup>    |
| 硬度:          | Knoop 610                               |
| 比热容:         | 858J Kg <sup>-1</sup> K <sup>-1</sup>   |
| 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 |                |         |
|--------------------|----------------|---------|
|                    | $\lambda$ [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          |         |

| 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 $\tau_l$ |                 |                 |
|---------------------------------|-----------------|-----------------|
| $\lambda$ [nm]                  | $\tau_l$ (10mm) | $\tau_l$ (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                     |       |
|--------------------------------|-------|
| $\lambda_{80}/\lambda_5$       | 33/29 |
| (*= $\lambda_{70}/\lambda_5$ ) |       |

| Remarks |
|---------|
|         |

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

| Deviation of Relative Partial Dispersions $\Delta P$ from the "Normal Line" |         |
|-----------------------------------------------------------------------------|---------|
| $\Delta P_{dt}$                                                             | 0.0216  |
| $\Delta P_{cs}$                                                             | 0.0087  |
| $\Delta P_{f,e}$                                                            | -0.0009 |
| $\Delta P_{gf}$                                                             | -0.0009 |
| $\Delta P_{lg}$                                                             | 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    |
| $\mu$                                   | 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  |