



**Optical Components:**  
*Plate Optics*

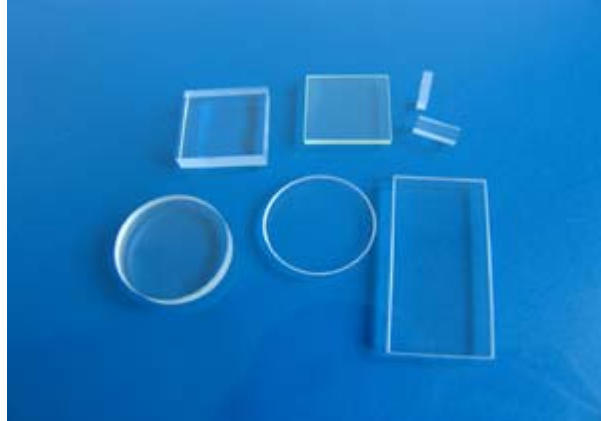
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## BK7 Windows

Windows are widely used on optical systems, which are applied to isolate the optical system from the environment while still allowing light to pass. The material of windows must be considered for different material with different transmission ranges. Also other specifications must be considered with certain environments.

Sinoceramics supply a large amount of windows with different materials including BK7 glass, Fused Silica, Sapphire, CaF<sub>2</sub> and other specific glass.



### High Precision BK7 Windows

#### Specifications:

Material: BK7 grade A glass  
 Diameter Tolerance: + 0.0 / -0.15mm  
 Thickness Tolerance: ± 0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 30 arc seconds or better  
 Surface Quality: 20-10 scratch and digs  
 Flatness:  $\lambda / 8$  @ 633nm  
 Wavefront Distortion:  $\lambda / 8$  per 25mm

### Standard BK7 Windows

#### Specifications:

Material: BK7 grade A glass  
 Diameter Tolerance: + 0.0 / -0.15mm  
 Thickness Tolerance: ± 0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 3 arc minutes  
 Surface Quality: 60-40 scratch and digs  
 Flatness:  $\lambda / 2$  @ 633nm  
 Wavefront Distortion:  $\lambda$  per 25mm

### The Standard Size for High Precision Windows

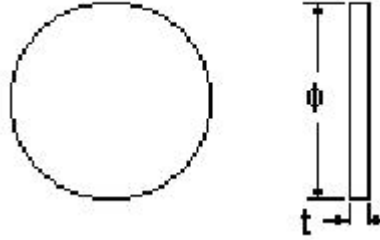
<b>Diameter</b>	10.0mm	12.7mm	25.4mm	30.0mm	50.0mm
<b>Thickness</b>	6.0mm	6.0mm	6.0mm	6.0mm	6.0mm
<b>Part Number</b>	WIN1110	WIN1112	WIN1125	WIN1130	WIN1150

### The Standard Size for Standard Windows

<b>Diameter</b>	10.0mm	12.7mm	25.4mm	30.0mm	50.0mm
<b>Thickness</b>	6.0mm	6.0mm	6.0mm	6.0mm	6.0mm
<b>Part Number</b>	WIN1210	WIN1212	WIN1225	WIN1230	WIN1250

## Fused Silica Windows

- High Precision!
- Low Thermal Expansion!
- Wide Wavelength Range!



### High Precision Fused Silica Windows Specifications:

Material: UV grade Fused Silica  
 Transmission Range: 0.185-2.5 $\mu$ m  
 Diameter Tolerance: + 0.0 / -0.15mm  
 Thickness Tolerance:  $\pm$  0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 30 arc seconds or better  
 Surface Quality: 20-10 scratch and dig  
 Flatness:  $\lambda$  / 8 @ 633nm  
 Wavefront Distortion:  $\lambda$  / 8 per 25mm

### Standard Fused Silica Windows Specifications:

Material: UV grade Fused Silica  
 Transmission Range: 0.185-2.5 $\mu$ m  
 Diameter Tolerance: + 0.0 / -0.15mm  
 Thickness Tolerance:  $\pm$  0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 3 arc minutes  
 Surface Quality: 60-40 scratch and dig  
 Flatness:  $\lambda$  / 2 @ 633nm  
 Wavefront Distortion:  $\lambda$  per 25mm

### The Standard Size for High Precision Windows

<b>Diameter</b>	10.0mm	12.7mm	25.4mm	30.0mm	50.0mm
<b>Thickness</b>	6.0mm	6.0mm	6.0mm	6.0mm	6.0mm
<b>Part Number</b>	WIN2110	WIN2112	WIN2125	WIN2130	WIN2150

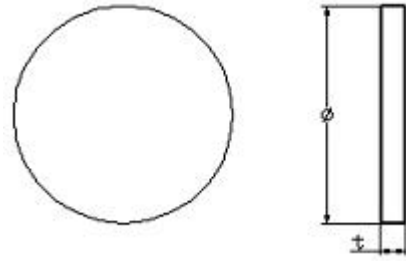
### The Standard Size for Standard Windows

<b>Diameter</b>	10.0mm	12.7mm	25.4mm	30.0mm	50.0mm
<b>Thickness</b>	3.0mm	3.0mm	3.0mm	3.0mm	3.0mm
<b>Part Number</b>	WIN2210	WIN2212	WIN2225	WIN2230	WIN2250

### CaF<sub>2</sub> Windows

**Specifications:**

Material: Calcium Fluoride Single Crystal  
 Transmission Range: 0.17-7.8μm  
 Dimension Tolerance: +0.0 / -0.15mm  
 Thickness Tolerance: ± 0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 3 arc minutes  
 Surface Quality: 80-50 scratch and digs  
 Flatness: λ / 2 @ 633nm



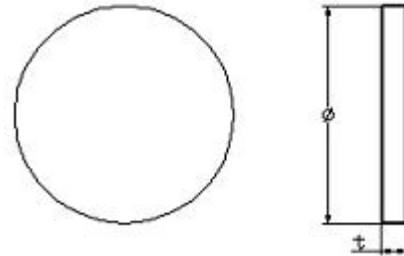
**The Standard Size for CaF<sub>2</sub> Windows**

<b>Diameter</b>	10.0mm	12.7mm	25.4mm	30.0mm	50.0mm
<b>Thickness</b>	1.0mm	2.0mm	3.0mm	3.0mm	8.0mm
<b>Part Number</b>	WIN3110	WIN3112	WIN3125	WIN3130	WIN3150

### Sapphire Windows

**Specifications:**

Material: Optical Grade Sapphire Crystal  
 Transmission Range: 0.185-4.5μm  
 Dimension Tolerance: +0.0 / -0.15mm  
 Thickness Tolerance: ± 0.2mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 3 arc minutes  
 Surface Quality: 80-50 scratch and digs  
 Flatness: λ per 25mm @ 633nm



**The Standard Size for Sapphire Windows:**

<b>Diameter</b>	10.0mm	12.7mm	20.0mm	25.4mm	30.0mm
<b>Thickness</b>	0.9mm	1.0mm	2.0mm	3.0mm	3.0mm
<b>Part Number</b>	WIN4110	WIN4112	WIN4120	WIN4125	WIN4130

## Wedge Plates

### Specifications:

Dimension Tolerance: +0.0 / -0.15mm

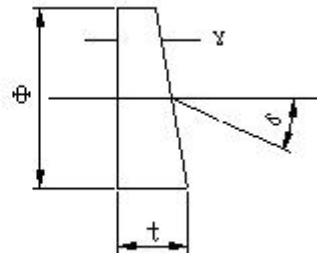
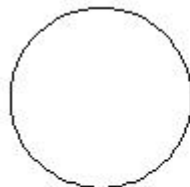
Thickness Tolerance:  $\pm 0.2$ mm

Clear Aperture: 90% Diameter

Parallelism: < 3 arc minutes

Surface Quality: 60-40 scratch and digs

Flatness:  $\lambda/4$  @ 633nm



### The Standard Size for BK7 Wedges:

Part Number	Diameter	$\delta$	$\gamma$	t
WEG1125	25.4mm	1°	1° 56min	3.86mm
WEG1225	25.4mm	2°	3° 52min	4.72mm
WEG1425	25.4mm	4°	7° 39min	6.41mm
WEG1625	25.4mm	6°	11° 19min	8.08mm

### The Standard Size for Fused Silica Wedges:

Part Number	Diameter	$\delta$	$\gamma$	t
WEG2125	25.4mm	1°	2° 10min	3.96mm
WEG2225	25.4mm	2°	4° 20min	4.92mm
WEG2425	25.4mm	4°	8° 34min	6.82mm
WEG2526	25.4mm	6°	12° 39min	8.70mm

## Brewster Plates

### Specifications:

Dimension Tolerance: +0.0 / -0.15mm

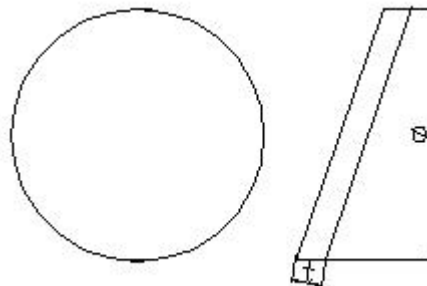
Thickness Tolerance:  $\pm 0.2$ mm

Clear Aperture: 90% Diameter

Parallelism: < 3 arc minutes

Surface Quality: 60-40 scratch and digs

Flatness:  $\lambda/4$  @ 633nm



### The Standard Size for BK7 Brewster Plate:

Part Number	Diameter	Thickness
BWT1112	12.7mm	4.0mm
BWT1115	15.0mm	5.0mm
BWT1125	25.4mm	6.0mm
BWT1150	50.0mm	12.0mm

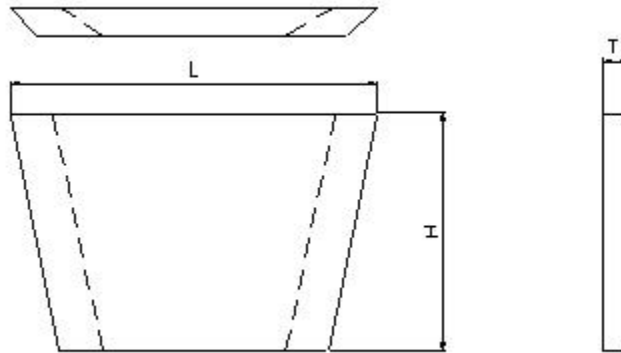
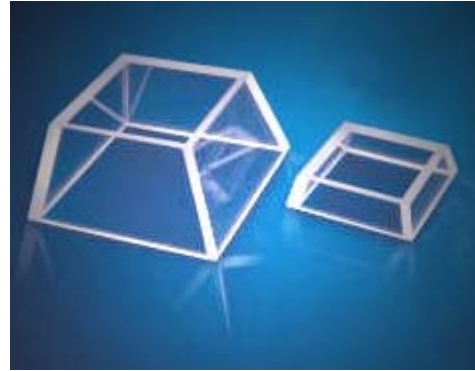
### The Standard Size for Fused Silica Brewster Plate:

Part Number	Diameter	Thickness
BWT2112	12.7mm	4.0mm
BWT2115	15.0mm	5.0mm
BWT2125	25.4mm	6.0mm
BWT2150	50.0mm	12.0mm

**Glass Housing:**

**Specifications:**

Dimension Tolerance: +0.0 / -0.15mm  
 Thickness Tolerance:  $\pm 0.2$ mm  
 Clear Aperture: 90% Diameter  
 Parallelism: < 5 arc seconds  
 Surface Quality: 60-40 scratch and digs  
 Flatness:  $\lambda/4$  @ 633nm



**The Standard Size for BK7 Glass Housing**

Part Number	Dimensions (mm <sup>3</sup> )	Thickness
GHP1135	35x35x28.5	4.0mm
GHP1168	68x68x32	4.0mm