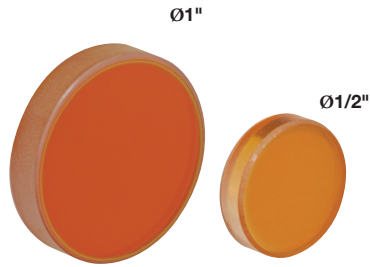




## Zinc Selenide Windows



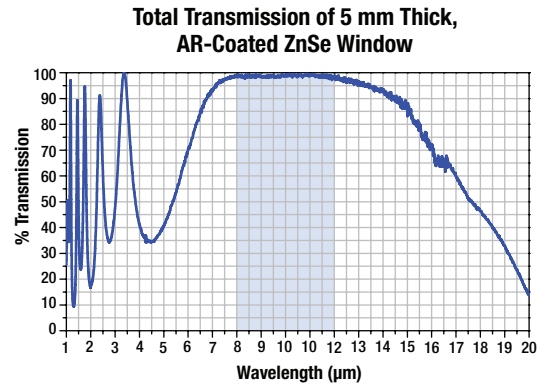
Thorlabs' Ø1/2" and Ø1" Zinc Selenide (ZnSe) PrecisionWindows are available either uncoated or with an AR coating for the 8 – 12  $\mu\text{m}$  range on both sides. Due to its wide transmission band and low absorption in the red portion of the visible spectrum, ZnSe is an ideal material for use in optical systems that combine CO<sub>2</sub> lasers, operating at 10.6 microns, with HeNe alignment lasers.

ZnSe has a broader transmission range than silicon or germanium; however, its use is typically limited to applications requiring the broad spectral range it offers because of the ease with which it scratches.

### Specifications

- **Material:** Zinc Selenide (Laser Grade)
- **Wavelength Range:** 600 nm – 16  $\mu\text{m}$
- **BBAR Coating:** 8–12  $\mu\text{m}$ ,  $R_{\text{avg}} < 1\%$  @ 0° AOI
- **Diameter Tolerance:** +0.0/-0.2 mm
- **Thickness Tolerance:**  $\pm 0.3$  mm
- **Surface Flatness:**  $\lambda$  at 633 nm
- **Surface Quality:** 40-20 Scratch-Dig
- **Parallelism:**  $\leq 1$  arcmin
- **Clear Aperture:** >90% of Diameter
- **Damage Threshold:** 5 J/cm<sup>2</sup> (10.6  $\mu\text{m}$ , 100 ns, 1 Hz, Ø0.478 mm)

Please contact your local Thorlabs office for custom optical scans.



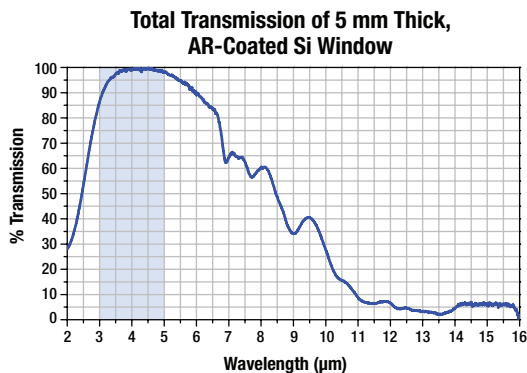
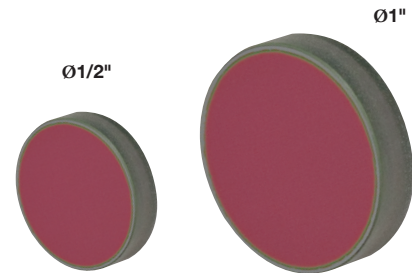
The shaded region in this graph denotes the AR coating range.

Custom AR Coatings in the Mid-IR are Available. Please Contact [techsupport@thorlabs.com](mailto:techsupport@thorlabs.com).

ITEM #	AR COATING	DIAMETER	THICKNESS	\$	£	€	RMB
WG71050	Uncoated	Ø1"	5.0 mm	\$ 158.00	£ 113.76	€ 137,46	¥ 1,259.26
WG70530-F	8 – 12 $\mu\text{m}$	Ø1/2"	3.0 mm	\$ 158.00	£ 113.76	€ 137,46	¥ 1,259.26
WG70530-F	8 – 12 $\mu\text{m}$	Ø1"	5.0 mm	\$ 194.00	£ 139.68	€ 168,78	¥ 1,546.18

## Silicon Windows

Thorlabs' Silicon (Si) Precision Windows are available in Ø1/2" and Ø1" sizes. An AR coating is deposited on both sides, which maximizes transmission in the 3 to 5  $\mu\text{m}$  range, while still maintaining high transmission in the 1.2 to 8  $\mu\text{m}$  spectral region. Silicon offers high thermal conductivity and low density. Since Silicon has a strong absorption band at 9  $\mu\text{m}$ , it is not suitable for use with CO<sub>2</sub> laser transmission applications.



The shaded region in this graph denotes the AR coating range.

### Specifications

- **Material:** Silicon
- **Wavelength Range:** 1.2 – 8  $\mu\text{m}$
- **BBAR Coating:** 3–5  $\mu\text{m}$ ,  $R_{\text{avg}} < 2\%$  @ 0° AOI
- **Diameter Tolerance:** +0.0/-0.2 mm
- **Thickness Tolerance:**  $\pm 0.3$  mm
- **Surface Flatness:**  $\lambda/2$  at 633 nm
- **Surface Quality:** 40-20 Scratch-Dig
- **Parallelism:**  $\leq 3$  arcmin
- **Clear Aperture:** >90% of Diameter

ITEM #	DIAMETER	THICKNESS	\$	£	€	RMB
WG80530-E	0.50"	3.0 mm	\$ 95.00	£ 68.40	€ 82,65	¥ 757.15
WG81050-E	1.00"	5.0 mm	\$ 134.60	£ 96.91	€ 117,10	¥ 1,072.76