

**Optics**

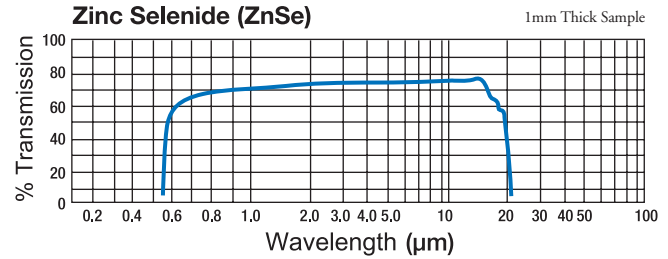
**Zinc Selenide: Plano-Convex Lenses**

With a transmission range from 600nm - 16µm, zinc selenide plano-convex lenses are ideal for IR applications. Due to the low absorption coefficient, these lenses are also particularly well suited for CO<sub>2</sub> laser applications. In contrast to Ge and Si, which also transmit in this spectral range, ZnSe transmits some visible light, thereby allowing for visual alignment of the optic.



**Specifications**

- **Material:** Laser Grade Zinc Selenide
- **Wavelength Range:** 0.6 to 16µm
- **Diameter Tolerance:** +0.00/-0.10mm
- **Thickness Tolerance:** ±0.2mm
- **Coating:** AR 99% @ 10.6µm
- **Focal Length Tolerance:** ±1%
- **Scratch-Dig:** 40-20
- **Centration:** 3arcmin
- **Clear Aperture:** 80% of Diameter
- **Design Wavelength:** 10.6µm



**Plano-Convex Lenses: Zinc Selenide**

ITEM #	DIA (mm)	f (mm)	PRICE				R (mm)	t <sub>c</sub> (mm)	t <sub>e'</sub> (mm)	f <sub>b</sub> (mm)	SUGGESTED MOUNT <sup>2</sup>
			\$	£	€	RMB					
LA7050	25.4	50	\$ 450.00	£ 283.50	€ 418.50	¥ 4,297.50	70.19	4	2.84	47.92	LMR1
LA7075	25.4	75	\$ 450.00	£ 283.50	€ 418.50	¥ 4,297.50	105.19	4	3.22	72.88	
LA7100	25.4	100	\$ 450.00	£ 283.50	€ 418.50	¥ 4,297.50	140.47	4	3.42	98.24	
LA7150	25.4	150	\$ 450.00	£ 283.50	€ 418.50	¥ 4,297.50	209.026	4	3.61	147.2	
LA7200	25.4	200	\$ 450.00	£ 283.50	€ 418.50	¥ 4,297.50	280.46	4	3.71	198.17	

1) Edge thickness given before 0.2mm @ 45° typical chamfer.  
2) See the Lens Mount Section, Starting on Page 153.

**TOOLS OF THE TRADE**

**Wire Grid Polarizers for the IR**

- Covering Wavelengths From 2000nm to 30µm
- Calcium Fluoride (CaF<sub>2</sub>), Barium Fluoride (BaF<sub>2</sub>), Zinc Selenide (ZnSe), and KRS-5
- High Transmission, High Extinction Ratios
- Mounted in a Double Protective Ring

**Specifications**

- All Polarizers can be Mounted in a Double Protective Ring
- **Wire Grid Spacing:** 2400 Grooves/mm
- **Parallelism:** 3arcmin
- **Substrate Thickness:** 2mm Nominal
- **Ring Diameter (Thickness):** Ø25mm (5.0 ± 0.1mm) Ø50mm (6.0 ± 0.1mm)
- **Damage Threshold:** CW Laser: 10W/cm<sup>2</sup> Pulsed Laser (100ns Pulse): 10kW/cm<sup>2</sup>

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MATERIAL	WAVELENGTH (µm)	TYPICAL EXTINCTION RATIO
CaF <sub>2</sub>	3	100
	8	250
BaF <sub>2</sub>	3	100
	10	300
ZnSe	3	100
	10	300
KRS-5	3	100
	15	200