

CHAPTERS

Optical Elements

Polarization Optics

Optical Isolators

Optical Systems

Optics Kits

SECTIONS

Spherical Lenses

Achromatic Lenses

Aspheric Lenses

Cylindrical Lenses

Mirrors

Spectral Filters

ND Filters

Beamsplitters

Prisms

Gratings

Windows

Diffusers

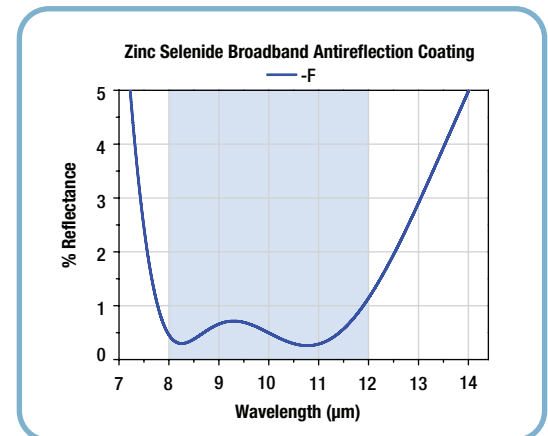
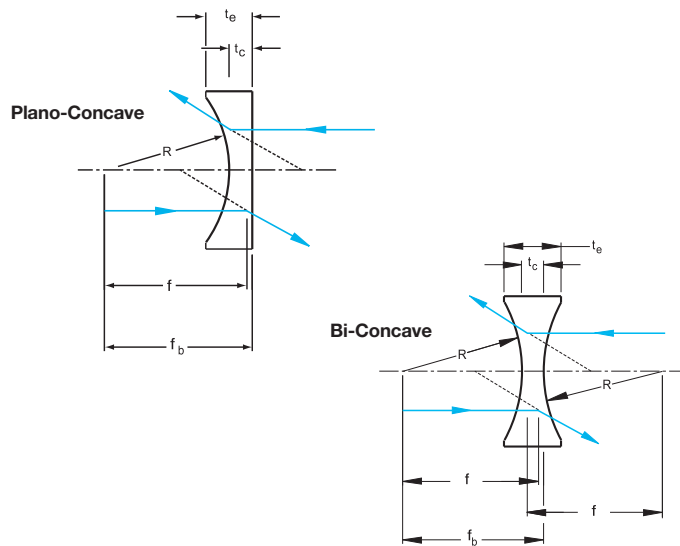
Zinc Selenide: Plano-Concave and Bi-Concave Lenses



Specifications

- Material: Laser-Grade Zinc Selenide
- Coating: $R_{avg} < 1.5\%$ from 8 - 12 μm
- Diameter Tolerance: $+0.00/-0.10$ mm
- Thickness Tolerance: ± 0.2 mm
- Focal Length Tolerance: $\pm 1\%$
- Surface Quality: 60-40 Scratch-Dig
- Centration: ≤ 3 arcmin
- Clear Aperture: 80% of Diameter
- Design Wavelength: 10.6 μm

Zinc Selenide plano-concave lenses have low absorption in the IR while transmitting some visible light to allow for an aiming beam in a setup. The plano-concave shape provides a negative focal length, which is used to diverge collimated beams of light in designs such as Galilean beam expanders and telescopes. These lenses are often used in applications such as thermal imaging and CO₂ laser applications. For custom AR coatings, please contact your local tech support office.



Please contact your local Thorlabs office for custom optical scans.

Zinc Selenide: Plano-Concave Lenses

ITEM #	DIA (mm)	f (mm)	PRICE				R (mm)	t _c (mm)	t _e * (mm)	f _b (mm)	SUGGESTED MOUNT**
			\$	£	€	RMB					
LC7759-F	25.4	-25.4	\$ 275.00	£ 198.00	€ 239,25	¥ 2,191.75	-35.6	2.0	4.3	-26.2	LMR1 See Page 268
LC7235-F	25.4	-50.0	\$ 275.00	£ 198.00	€ 239,25	¥ 2,191.75	-70.1	2.0	3.2	-50.8	
LC7421-F	25.4	-75.0	\$ 275.00	£ 198.00	€ 239,25	¥ 2,191.75	-105.2	2.0	2.8	-75.8	
LC7414-F	25.4	-100.0	\$ 275.00	£ 198.00	€ 239,25	¥ 2,191.75	-140.3	2.0	2.6	-100.0	
LC7142-F	25.4	-200.0	\$ 275.00	£ 198.00	€ 239,25	¥ 2,191.75	-280.5	2.0	2.3	-200.0	

*Edge Thickness prior to chamfer (0.2 mm at 45° typical) **See the Lens Mount Section, Starting on Page 267.

Bi-Concave lenses have a negative focal length and are commonly used to increase the divergence of converging light.

Zinc Selenide: Bi-Concave Lenses

ITEM #	DIA (mm)	f (mm)	PRICE				R (mm)	t _c * (mm)	t _e * (mm)	f _b (mm)	SUGGESTED MOUNT**
			\$	£	€	RMB					
LD7671-F	25.4	-25.4	\$ 285.00	£ 205.20	€ 247,95	¥ 2,271.45	-71.8	2.0	4.3	-25.8	LMR1 See Page 268
LD7503-F	25.4	-50.0	\$ 285.00	£ 205.20	€ 247,95	¥ 2,271.45	-140.8	2.0	3.2	-50.4	
LD7877-F	25.4	-75.0	\$ 285.00	£ 205.20	€ 247,95	¥ 2,271.45	-211.0	2.0	2.8	-75.4	
LD7071-F	25.4	-100.0	\$ 285.00	£ 205.20	€ 247,95	¥ 2,271.45	-281.1	2.0	2.6	-100.4	
LD7902-F	25.4	-200.0	\$ 285.00	£ 205.20	€ 247,95	¥ 2,271.45	-561.6	2.0	2.3	-200.4	

*Edge Thickness prior to chamfer (0.2 mm at 45° typical) **See the Lens Mount Section, Starting on Page 267.