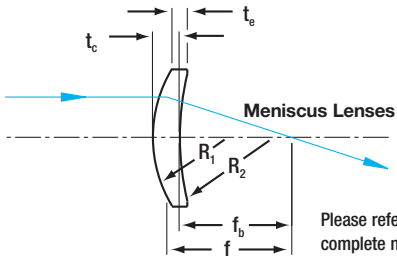
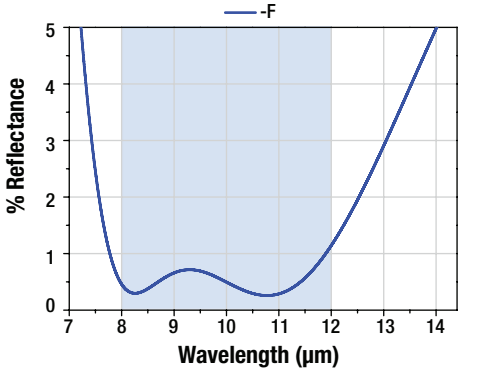
Zinc Selenide: Meniscus Lenses

Specifications

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



Please refer to our website for complete models and drawings.



These new ZnSe Meniscus Lenses have been designed to pair with ZnSe Plano-Convex lenses (See page 674) of the same focal length to minimize the spherical aberration of the system and alter the focal length. The Positive Meniscus lens is used to decrease the focal length of the other lens while maintaining the angular resolution of the optical assembly and achieve a tighter spot size.

Negative Meniscus lenses are often used to increase the focal length, and therefore decrease the numerical aperture (NA), of an optical assembly. This use is common in beam expanding applications. ZnSe is the most popular material used in the IR. It has the additional benefit of transmitting some visible light, allowing for use of an aiming beam in a setup. To enhance the usefulness of these optics in the IR, a broadband antireflection coating for 8 - 12 µm has been added to each surface.

Zinc Selenide: Positive Meniscus Lenses

Please contact your local Thorlabs office for custom optical scans.

ITEM #	DIA (mm)	f (mm)	PRICE $	PRICE £	PRICE €	PRICE RMB	R_1 (mm)	R_2 (mm)	t_c (mm)	t_e* (mm)	f_b (mm)	SUGGESTED MOUNT**
LE7246-F	12.7	15.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	7.5	9.0	2.9	2.0	11.6	LMR05 See Page 268
LE7276-F	12.7	20.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	7.5	7.8	3.0	2.7	15.3	
LE7963-F	12.7	40.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	10.9	11.3	3.0	2.9	33.6	
LE7185-F	25.4	25.4	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	15.5	22.6	4.7	2.0	20.9	LMR1 See Page 268
LE7981-F	25.4	50.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	15.5	16.9	4.0	3.1	42.5	
LE7996-F	25.4	75.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	21.0	23.3	4.0	3.5	66.6	
LE7031-F	25.4	100.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	28.4	32.6	4.0	3.6	91.8	
LE7667-F	25.4	150.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	42.7	50.7	4.0	3.7	141.8	
LE7898-F	25.4	200.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	57.7	69.7	4.0	3.8	191.9	
LE7495-F	25.4	500.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	146.1	181.6	4.0	3.9	492.0	
LE7117-F	25.4	750.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	219.6	274.5	4.0	3.9	742.0	
LE7199-F	25.4	1000.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	293.0	367.5	4.0	3.9	992.0	

*Edge Thickness given before 0.2 mm at 45° typical Chamfer. **See the Lens Mount Section, Starting on Page 267.

Zinc Selenide: Negative Meniscus Lenses

ITEM #	DIA (mm)	f (mm)	PRICE $	PRICE £	PRICE €	PRICE RMB	R_1 (mm)	R_2 (mm)	t_c (mm)	t_e* (mm)	f_b (mm)	SUGGESTED MOUNT**
LF7769-F	12.7	-15.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	13.5	7.5	2.0	3.9	-13.7	LMR05 See Page 268
LF7134-F	12.7	-20.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	12.6	7.9	2.0	3.5	-18.2	
LF7185-F	12.7	-40.0	$ 350.00	£ 252.00	€ 304,50	¥ 2,789.50	10.9	7.6	3.0	4.3	-33.6	
LF7733-F	25.4	-25.4	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	31.6	15.5	4.0	8.0	-23.5	LMR1 and SM1L05 See Page 268 & 134
LF7601-F	25.4	-50.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	23.0	15.6	4.0	6.7	-44.9	LMR1 See Page 268
LF7053-F	25.4	-75.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	21.0	15.5	4.0	6.3	-66.6	
LF7785-F	25.4	-100.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	28.4	21.6	4.0	5.1	-91.8	
LF7113-F	25.4	-150.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	42.7	33.6	4.0	4.6	-141.8	
LF7321-F	25.4	-200.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	57.7	45.9	4.0	4.4	-191.9	
LF7639-F	25.4	-500.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	146.1	119.0	4.0	4.1	-492.0	
LF7589-F	25.4	-750.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	219.6	179.7	4.0	4.1	-742.0	
LF7573-F	25.4	-1000.0	$ 505.00	£ 363.60	€ 439,35	¥ 4,024.85	293.0	240.5	4.0	4.1	-992.0	

*Edge Thickness given before 0.2 mm at 45° typical Chamfer. **See the Lens Mount Section, Starting on Page 267.