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50.8mm Dia. x 100mm FL, Uncoated, ISP Optics Germanium (Ge) Meniscus Lens | GE-PM-50-100

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Stock **#24-840** **5 In Stock**

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General

Type:
Meniscus Lens

Model Number:
GE-PM-50-100

Physical & Mechanical Properties

Diameter (mm):
50.80 +0.00/-0.13

Center Thickness CT (mm):	5.80 ±0.20
Centering (arcmin):	<3
Clear Aperture (%):	90
Clear Aperture CA (mm):	45.72
Edge Thickness ET (mm):	4.80

Optical Properties

Effective Focal Length EFL (mm):	100.00 @ 10.6µm
Substrate:	Germanium (Ge)
f/#:	1.97
Numerical Aperture NA:	0.25
Coating:	Uncoated
Wavelength Range (nm):	2000 - 14000
Focal Length Tolerance (%):	±2
Radius R_1 (mm):	139.64
Radius R_2 (mm):	98.4
Surface Quality:	60-40
Irregularity (P-V) @ 10.6µm:	λ/20

Regulatory Compliance

RoHS 2015:	Compliant
Certificate of Conformance:	View
Reach 240:	Compliant

Product Details

- Positive Meniscus Lens Designs
- Minimize Spherical Aberration and Reduce Spot Sizes
- Wavelength Range of 2 - 16µm
- Due to material supply chain disruptions with germanium, there may be increased lead times and price changes on our germanium products. For more information, please contact our **customer service team**.
- Edmund Optics has limited remaining inventory of this part number and no raw material available to supply more once this is depleted. Please contact our Product Support Engineers to help with an alternate solution for your needs. Customer Service can provide you the latest price and availability.

ISP Optics Germanium (Ge) Meniscus Lenses are convex-concave lenses designed to minimize spherical aberration and reduce spot sizes. Germanium provides even transmission through the mid-wave infrared (MWIR) and long-wave infrared (LWIR) spectra, making it ideal for applications including thermal imaging, remote sensing, and infrared spectroscopy. Due to thermal runaway, or the decrease in transmission as temperature increases, germanium optics should be used at temperatures below 100°C. ISP Optics Germanium (Ge) Meniscus Lenses are available with focal lengths ranging from 13 to 150mm in standard imperial sizes for easy integration into benchtop systems.

Special Handling

Germanium Optics Handling and Cleaning Guidelines

Germanium optics require special handling and cleaning procedures. Always wear gloves during handling to prevent contamination, and wash hands afterward. Avoid contact between Germanium dust and the eyes, skin, or clothing. When not in use, store optics sealed and covered at temperatures between 20°C and 25°C. Do not expose them to temperatures exceeding 100°C when in use.

Handling Guidelines

- Always wear **gloves** to prevent damage from skin oils.
- If Germanium dust is present, take the following precautions:
  - Wear safety glasses to protect eyes.
  - Use a dust mask or face mask to avoid inhalation.
  - Wear **gloves** to prevent skin contact.
- Maintain storage temperature between 20°C and 25°C with humidity below 30%.
- Wrap Germanium optics in a **lens cloth** or **pouch** and seal in a **container** when not in use.
- Germanium is brittle and heavy — always place it on soft surfaces and avoid dropping it.

Approved Cleaning Solvents

- Ethanol
- Isopropyl Alcohol
- Methanol
- Reagent-Grade Acetone

- Liquid CO
- **Shop Now**

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