

**TECHSPEC® 50mm Dia. x 50mm FL, 3-5µm Coated Germanium Meniscus Lens**



Stock **#87-964** **3 In Stock**

S\$2,394<sup>00</sup>

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**General**

Meniscus Lens Type:

**Physical & Mechanical Properties**

50.00 +0.0/-0.1 Diameter (mm):

5.00 Center Thickness CT (mm):

±0.10 Center Thickness Tolerance (mm):

Centering (arcmin):

<3

90.00 Clear Aperture (%):

2.6 Edge Thickness ET (mm):

### Optical Properties

50.00 Effective Focal Length EFL (mm):

Germanium (Ge) Substrate: □

1.00 f#:

0.50 Numerical Aperture NA:

BBAR (3000-5000nm) Coating:

3000 - 5000 Wavelength Range (nm):

46.69 Back Focal Length BFL (mm):

R<sub>avg</sub> <3.0% @ 3 - 5μm Coating Specification:

10.6 Focal Length Specification Wavelength (μm):

56.64 Radius R<sub>1</sub> (mm):

84.91 Radius R<sub>2</sub> (mm):

60-40 Surface Quality:

3 - 5 Wavelength Range (μm):

### Regulatory Compliance

Compliant RoHS 2015:

View Certificate of Conformance:

Compliant REACH 241:

## Product Details

- Wavelength Range of 2 - 16μm
- Durable Design for Demanding Applications
- Superior Spherical Correction
- 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.

TECHSPEC® Germanium Meniscus Lenses are designed for demanding infrared applications including infrared imaging or surveillance, remote sensing, or infrared spectroscopy. TECHSPEC Germanium Meniscus Lenses offer superior spherical correction and smaller spot sizes than comparable focal length [TECHSPEC Germanium PCX Lenses](#). These meniscus lenses are offered uncoated or anti-reflection coated for increased performance in the designated coating wavelength range.

## Technical Information

### Ge with 3-5 $\mu$ m AR Coating Typical Transmission



Typical transmission of a 3mm thick Ge window with BBAR (3000-5000nm) coating at 0° AOI.

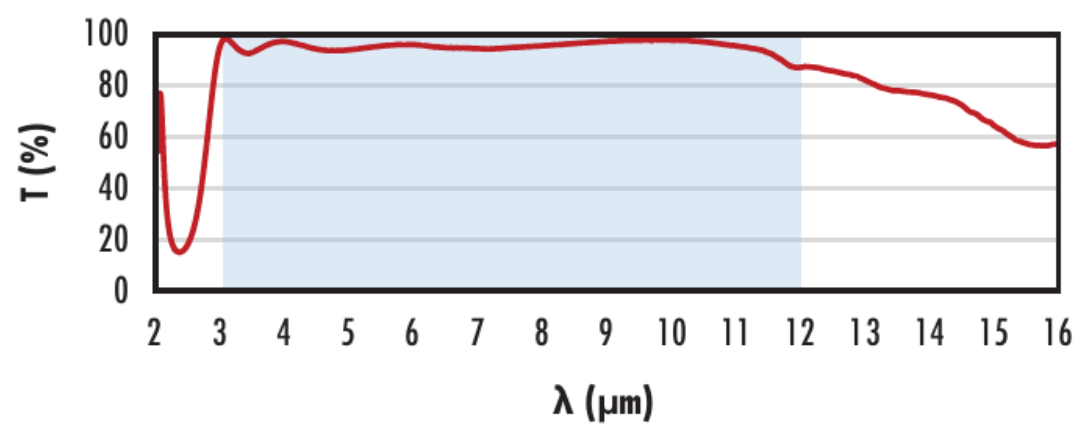
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} < 3\% @ 3000 - 5000\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

### Ge with 3-12 $\mu$ m AR Coating Typical Transmission



Typical transmission of a 3mm thick Ge window with BBAR (3000-12000nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} < 5.0\% @ 3 - 12\mu\text{m}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

### 8-12 $\mu$ m AR Coated Germanium Typical Transmission



Typical transmission of a 3mm thick Ge window with BBAR (8000-12000nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} < 3.0\% @ 8 - 12\mu\text{m}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

## 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<sub>2</sub>
- [Shop Now](#)

## Compatible Mounts

