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TECHSPEC® 25mm Dia x 40mm FL 3-5µm Coated, Hybrid Ge Aspheric Lens



Stock #68-264 **20+ In Stock**

S\$2,037⁰⁰

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General

Aspheric Lens **Type:**

Physical & Mechanical Properties

25.00 +0.0/-0.1 **Diameter (mm):**

≤5 **Centering (arcmin):**

24.0 **Clear Aperture CA (mm):**

Edge Thickness ET (mm):

1.35

Center Thickness CT (mm):
2.10 ±0.10

Bevel:
Protective as needed

Edges:
Diamond Turned

Shape of Back Surface:
Concave

Optical Properties

Effective Focal Length EFL (mm):
40.00 @4000nm

Numerical Aperture NA:
0.31

Back Focal Length BFL (mm):
38.32

Substrate:
Germanium (Ge)

Aspheric Design Wavelength (nm):
4000

Asphere Figure Error, RMS @ 632.8nm:
λ/6

Coating:
BBAR (3000-5000nm)

Coating Specification:
R_{avg} <3.0% @ 3 - 5μm

Surface Accuracy, P-V (μm):
0.3

Surface Quality:
60-40

f#:
1.61

Index of Refraction (n_d):
4.002 @ 11μm

Radius R₂ (mm):
52

Wavelength Range (nm):
3000 - 5000

Conjugate Distance:
Infinite

Focal Length Specification Wavelength (nm):
4000

Material Properties

Coefficient of Thermal Expansion CTE (10⁻⁶/°C):
6.1

Regulatory Compliance

Reach 224:
[Compliant](#)

Certificate of Conformance:
[View](#)

Product Details

- Color Corrected for 3 – 5μm
- Near Diffraction Limited Focusing Performance
- Full Prescription Data Available
- 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.

Our TECHSPEC® Germanium Infrared (IR) Hybrid Aspheric Lenses provide diffraction limited focusing performance at any wavelength in the 3 – 5μm region, and near diffraction limited performance when used over the entire 3 -5μm spectral range. They are ideal for integration into imaging applications, FTIR spectrometers, or any Mid-Wave IR application utilizing a broad band light source.

Each hybrid aspheric lens is coated for >95% transmission for the most efficient use of costly infrared illumination. However, transmission is limited by the inherent diffraction efficiency of the aspheric surface, yielding lower overall transmission at the extremes of the design spectral band. For custom design or coating options, please contact our [Sales Department](#).

Technical Information



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 CO₂
- [Shop Now](#)

Compatible Mounts