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50.8mm Dia. x 300mm FL, Uncoated, ISP Optics Germanium (Ge) PCX Lens | GE-PX-50-300

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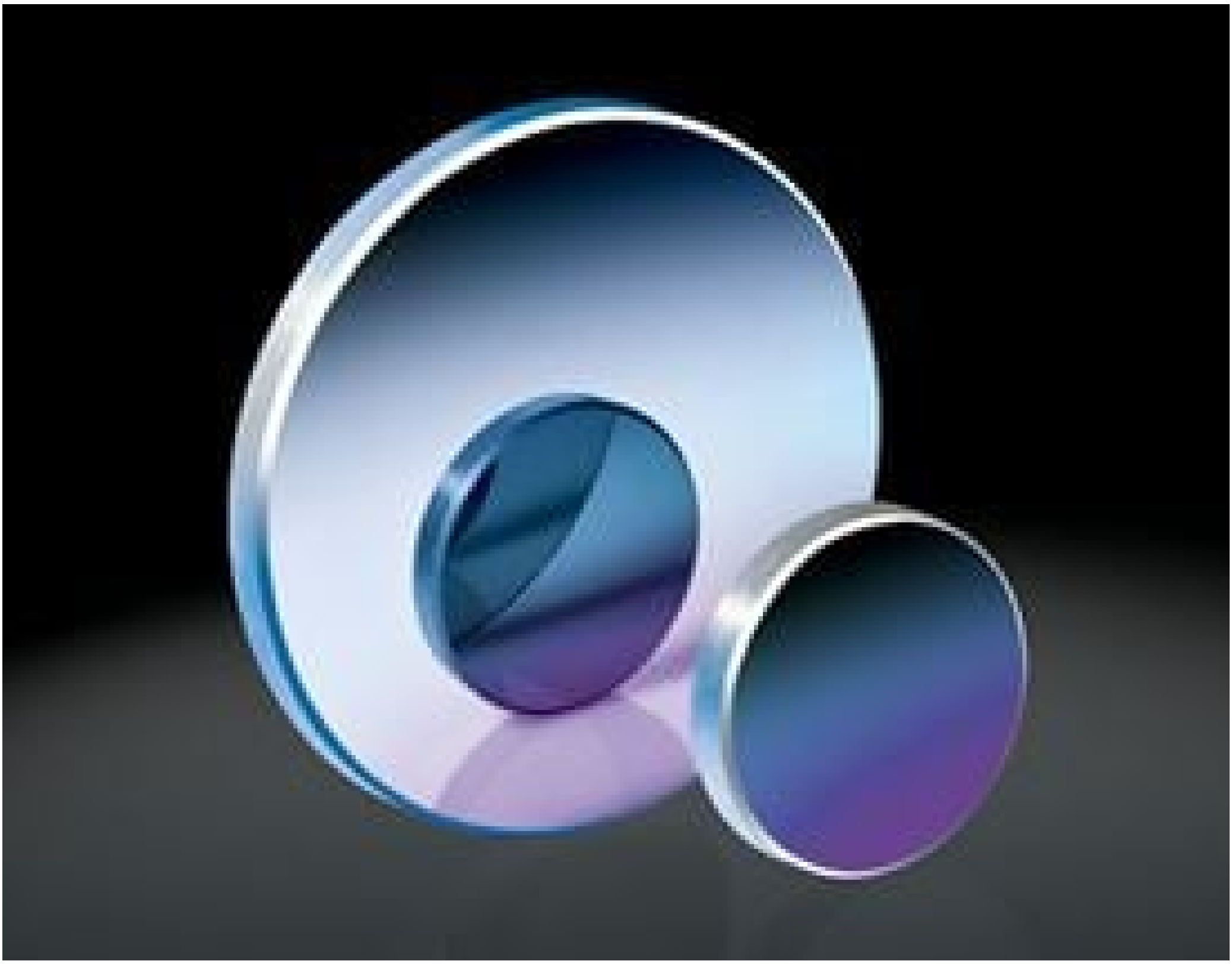

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General

Type:
Plano-Convex Lens

Model Number:
GE-PX-50-300

Physical & Mechanical Properties

Diameter (mm):
50.80 +0.00/-0.13

Centering (arcmin):
<3

Center Thickness CT (mm):
2.90 ±0.20

Edge Thickness ET (mm):
2.50

Clear Aperture CA (mm):
45.72

Bevel:
Protective as needed

Optical Properties

Effective Focal Length EFL (mm):
300.00 @10.6µm

Coating:
Uncoated

Substrate:
Germanium (Ge)

Surface Quality:
60-40

Irregularity (P-V) @ 10.6µm:
λ/20

Focal Length Tolerance (%):
±2

Radius R_1 (mm):
855.10

f/#:
5.91

Numerical Aperture NA:
0.08

Wavelength Range (nm):
2000 - 14000

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 240:
Compliant

Product Details

- Ideal for Thermal Imaging Applications
- Uncoated Transmission from 2 – 16µm
- Available Uncoated or BBAR Coated for 3 - 12µm
- 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) Plano-Convex (PCX) Lenses provide transmission and low absorption through the Long-Wave Infrared (LWIR) spectrum, making them useful for thermal imaging applications. Germanium is chemically inert and insoluble in water with a Knoop Hardness of 780, making it ideal for applications requiring rugged optics. However, Germanium is subject to thermal runaway and should be used at temperatures below 100°C. ISP Optics Germanium (Ge) Plano-Convex (PCX) Lenses are available uncoated with a broad transmission range from 2 – 16µm or with a Broadband Anti-Reflection (BBAR) coating for enhanced transmission in the Mid-Wave Infrared (MWIR) and Long-Wave Infrared (LWIR).

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_2
- Shop Now

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