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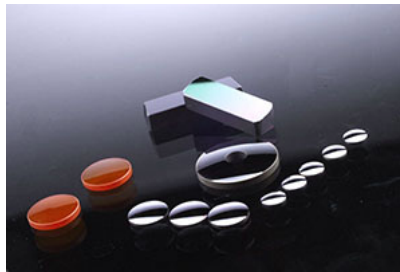
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- Spherical Lens
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- Optical Filter
- Window
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- Rod Lens
- Test Plates

Germanium

- | | |
|------------------|---------------|
| Silicon | Germanium |
| Calcium Fluoride | Sapphire |
| Zinc Sulfide | Zinc Selenide |



Germanium is most widely used for lenses and windows in infrared systems operating in the 2-12 μm range. Due to wide transmission range and opaque in the visible, Ge is well suited for manufacturing of optical components for IR applications in lasers and optical systems. Germanium's high refractive index makes Ge ideal for low power imaging systems because of minimum surface curvature. Chromatic aberration is small, often eliminating the need for correction. Germanium absorption increases with temperature. Pronounced transmission degradation starts at about 100°C and rapid degradation between 200°C and 300°C, resulting in possible catastrophic failure of the optic. Germanium components are used with AR coatings because of high surface reflectivity of substrate.

Specifications:

Material:Ge

Diameter Tolerance: +0.00, -0.15mm(Standard), +0.00,-0.02mm(Precision)

Flatness: $\lambda/632.8\text{nm}$

Surface Quality: 60-40 S/D

Paraxial Focus Length: +/-2%

Centration: <5arc minutes

Clear Aperture: >85% of diameter

Bevel: 0.25x45deg

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