

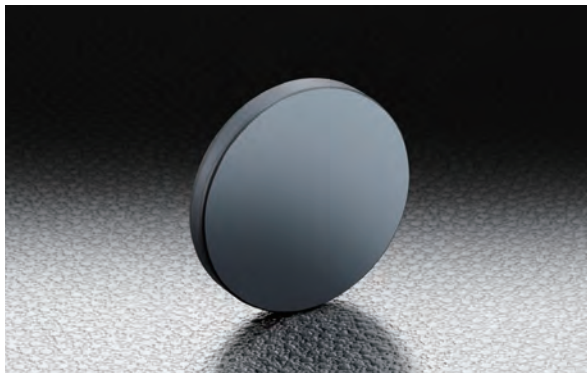
Germanium Windows for Infrared Laser

OPGE

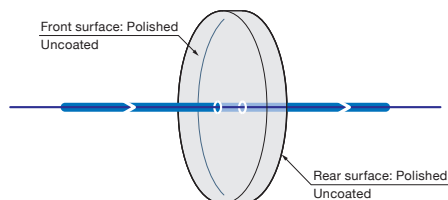
RoHS

The Germanium as a mono crystal primarily used in semi-conductor is non-absorptive at $2\mu\text{m}$ to $20\mu\text{m}$ IR regions. It is used here as an optical component for IR region applications.

- These germanium windows do not transmit at $1.5\mu\text{m}$ region or below, therefore its main application is in the IR regions.
- Germanium windows can be used in various infrared experiments.

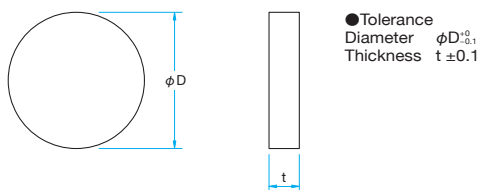


Schematic

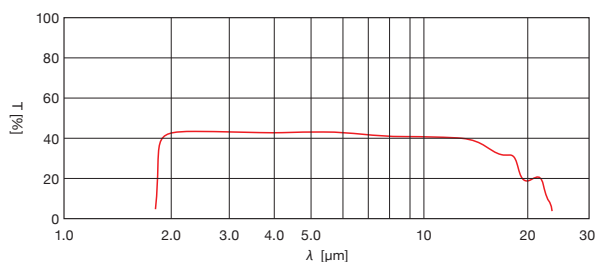


Outline Drawing

(in mm)



Typical Transmittance Data T: Transmission



Specifications

Material	Germanium Single Crystal
Parallelism	<3'
Surface Quality (Scratch-Dig)	40-20
Clear aperture	90% of real diameter

Guide

- ▶ For transmittance at visible regions optics, we recommend to use ZnSe IR spectrum windows.
- ▶ For product sizes and wedges which are not listed on our website or in our catalog, please contact our Sales Division with your requests.

Attention

- ▶ Germanium windows have a shiny metal surface; it reflects and absorbs but does not transmit in the visible regions..
- ▶ Germanium windows surface reflection results in transmittance loss of 42%. (Measured data 1 surface reflection at 35%)

Physics

Wavelength [μm]	Refractive Index
2	4.120
3	4.044
4	4.025
5	4.016
6	4.012
7	4.009
8	4.007
9	4.006
10	4.004
10.6	4.004
11	4.004
12	4.003
13	4.002
14	4.002
Density	5.33g/cm ³
Thermal Conductivity	58.6W·m ⁻¹ K ⁻¹ (20°C)
Thermal Expansion Coefficient	5.5×10 ⁻⁶ /°C (25°C)

Specifications

Part Number	Diameter φD [mm]	Thickness t [mm]
OPGE-30C03-P	φ30	3
OPGE-50C05-P	φ50	5

Compatible Optic Mounts

LHF-30S, -50S

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