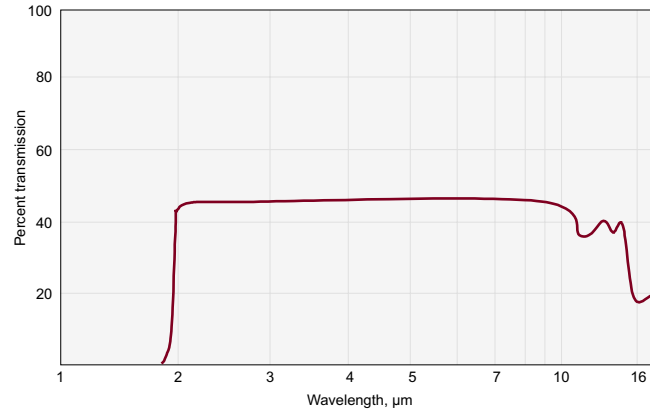


GERMANIUM (Ge) COMPONENTS

- Wide IR transmission range covering 1.8–16 μm
- Opaque in the visible range

Ge based optical components are widely used for IR applications. Ge is well suited for manufacturing windows and lenses for IR applications in lasers and optical systems. Ge components are used with AR coatings because of high surface reflectivity of substrate.

The high refractive index ensures an exceptional single wavelength performance for a "best form" singlet constructed from germanium.



External transmission for Ge window of 10 mm thickness.

PHYSICAL PROPERTIES

Crystal type	cubic
Lattice constant, Å	a = 5.657
Density, g/cm ³	5.33
Melting point, °C	937
Refractive index @ 10.6 μm	n = 4.0034
Transmission band, μm	1.8–17

SPECIFICATIONS

Material	optical quality Ge crystal ($\Delta n/cm < 0.5 \times 10^{-5}$)
Surface quality	60–40 scratch & dig
Clear aperture	80% of the diameter
Diameter tolerance	+0.0 -0.1 mm
Thickness tolerance	±0.2 mm
Surface flatness	< 1.5 λ per inch @ 633 nm
Parallelism	< 3 arcmin

Ge lenses, Brewster windows, mirrors and beamsplitters are available upon request.

Catalogue number	Diameter, mm	Thickness, mm	Coating	Price, EUR
580-6023	25.4	3.0	uncoated	99
580-6034	38.1	4.0	uncoated	210
580-6055	50.8	5.0	uncoated	299
580-6123	25.4	3.0	AR/AR @ 10.6 μm	159
580-6134	38.1	4.0	AR/AR @ 10.6 μm	269
580-6155	50.8	5.0	AR/AR @ 10.6 μm	370

Please contact us for other sizes or required specifications of coating.

HOUSING ACCESSORIES

- Kinematic Mirror and Beamsplitter Mount 840-0020
See page 5.51



COATINGS

MIRRORS

LENSES

WINDOWS & FILTERS

PRISMS

POLARISING OPTICS

UV & IR OPTICS