

Advantages of LightPath's BD6 Chalcogenide Glass

- High Transmission over 1-14µm Band
- Low Weight (13% lower than Ge)
- Optical Athermalization with low dn/dT (13 times lower than Ge)
- Can be diamond-turned, polished or molded (scales to high volume)
- No Germanium Content



BD6 chalcogenide glass is ideal for use in MWIR and LWIR thermal imaging systems. Our team of experienced engineers will work with you to design lenses for your application.

Optical Properties

Refractive Indices and Absorption Coefficient		
Wavelength λ (μm)	Refractive Index	Absorption Coefficient (cm^{-1})
2	2.8230	0.003
4	2.7978	0.002
6	2.7914	0.002
8	2.7867	0.002
10	2.7816	0.003
12	2.7755	0.004
14	2.7683	0.068

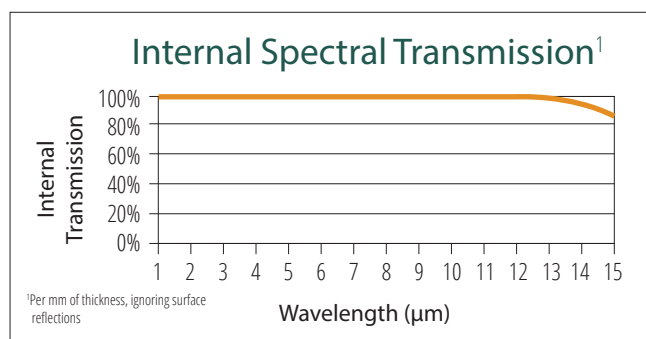
Internal Transmission Formula

$$T_i = e^{(-a \cdot d)}$$

Where a is the absorption coefficient, and d is the sample thickness

Coatings

HEAR and DLC coatings available



Other Properties

Mechanical Properties	
Density	4.63 g/cm ³
Hardness (Vickers)	142 HV
Young's Modulus	19.8 GPa

Thermal Properties	
Max Exposure Temp	110°C
CTE (25-100°C)	22.5 x 10 ⁻⁶ /°C
dn/dT @ 10 μm (0-40°C)	30.5 x 10 ⁻⁶ /°C

Equivalent Glass Types	
Brand	Name
Schott	IRG 26
Vitron	IG6

LightPath[®]
TECHNOLOGIES