

Infrared Chalcogenide Glass IG2

Product Information

IG2 is produced from the components Ge-As-Se. The excellent transmission, low thermal change in refractive index and dispersion enable the optical designers to design color corrected optical systems without thermal defocusing. IG2 is optimized for pairing with other IR materials in designs. IG2 is widely recognized as an equivalent material for AMTIR-1¹.

Forms of Supply

IG2 is available as custom cut blanks, generated lens blanks and moldings for customers fabrication for both atmospheric windows 3-5 μ m and 8-12 μ m.



Material Properties

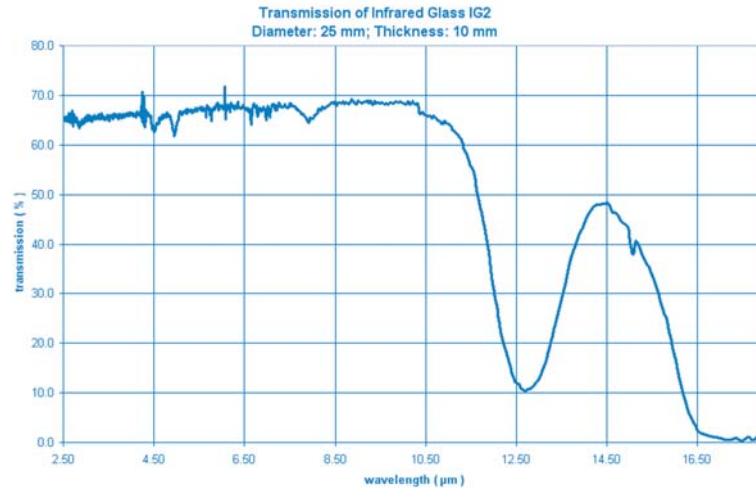
Composition	Ge ₃₃ As ₁₂ Se ₅₅
Density	4.41 g/cm ³
Thermal Expansion	12.1 x 10 ⁻⁶ /K
Specific Heat	0.33 J/gK
Thermal Conductivity	0.24 W/mK
Transition Temperature	368° C
Hardness (Knoop)	1.41 GPa
Rupture Modulus	19 MPa
Young's Modulus	21.5 GPa
Shear Modulus	21.5 GPa
Dispersion	108 (10.6 μ m)
Thermal change dn/dT	60 x 10 ⁻⁶ /K (10.6 μ m)

μ m	Transmission %	Index
3.0	68	2.5173
4.0	68	2.5129
5.0	68	2.5098
6.0	68	2.5072
7.0	68	2.5048
8.0	68	2.5024
9.0	68	2.4996
10	68	2.4967
11	68	2.4930
12	56	2.4882

¹ AMTIR-1 is a material offered by Amorphous Materials.

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Transmission Curve



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