

Infrared Chalcogenide Glass LWG-2

Composition: $\text{Ge}_{33}\text{As}_{12}\text{Se}_{55}$

Mechanical Properties

Density	4.41 g/cm ³
Hardness (Knoop)	1.41 GPa
Young's Modulus	21.5 GPa

Thermal Properties

Transition Temperature	365 °C
Specific Heat	0.33 J/(g·K)
Thermal Conductivity	0.24 W/(m·K)
Thermal Expansion	12.1 ppm/K

Optical Properties

Refractive index	
λ (μm)	n_λ
2.0	2.5299
3.0	2.5181
4.0	2.5133
5.0	2.5102
6.0	2.5077
7.0	2.5052
8.0	2.5025
9.0	2.4997
10.0	2.4965
11.0	2.4930
12.0	2.4889
13.0	2.4843
14.0	2.4792

Abbe number	
λ (μm)	ν
3-5	192
8-12	110

Thermo-optic coefficient (-40-100 °C)	
λ (μm)	dn/dt
10	68 ppm/K

Transmittance (10 mm)	
λ (μm)	τ (%)
2.0	67.6
3.0	67.6
4.0	67.8
5.0	67.6
6.0	68.1
7.0	68.1
8.0	68.5
9.0	68.6
10.0	68.4
11.0	67.2
12.0	54.8
13.0	46.2
14.0	55.7

Refractive index tolerance:
±0.001

Size of Supply:

- Diameter: 5~150 mm
- Thickness: 2~50 mm

