

Infrared Chalcogenide Glass LWG-1

Composition: Ge₂₂As₂₀Se₅₈

Mechanical Properties

Density	4.40 g/cm ³
Hardness (Knoop)	1.43 GPa
Young's Modulus	17.9 GPa

Thermal Properties

Transition Temperature	292 °C
Specific Heat	0.36 J/(g·K)
Thermal Conductivity	0.28 W/(m·K)
Thermal Expansion	16.8 ppm/K

Optical Properties

Refractive index	
λ (μm)	n _λ
2.0	2.5268
3.0	2.5148
4.0	2.5099
5.0	2.5069
6.0	2.5045
7.0	2.5021
8.0	2.4996
9.0	2.4970
10.0	2.4941
11.0	2.4907
12.0	2.4869
13.0	2.4829
14.0	2.4781

Abbe number	
λ (μm)	v
3-5	191
8-12	118

Thermo-optic coefficient (-40-100 °C)	
λ (μm)	dn/dt
10	62 ppm/K

Transmittance (10 mm)	
λ (μm)	τ (%)
2.0	68.1
3.0	67.9
4.0	68.0
5.0	66.7
6.0	68.2
7.0	68.3
8.0	67.8
9.0	68.5
10.0	68.3
11.0	66.4
12.0	50.8
13.0	38.3
14.0	50.3

Refractive index
tolerance: ±0.001

Size of Supply:

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

