

## Infrared Chalcogenide Glass LWG-6

Composition:  $As_2Se_3$

### Mechanical Properties

Density	4.63 g/cm <sup>3</sup>
Hardness (Knoop)	1.04 GPa
Young's Modulus	18.3 GPa

### Thermal Properties

Transition Temperature	185 °C
Specific Heat	0.36 J/(g·K)
Thermal Conductivity	0.24W/(m·K)
Thermal Expansion	20.8 ppm/K

### Optical Properties

Refractive index	
$\lambda$ ( $\mu\text{m}$ )	$n_\lambda$
2.0	2.8192
3.0	2.8011
4.0	2.7943
5.0	2.7904
6.0	2.7876
7.0	2.7851
8.0	2.7826
9.0	2.7801
10.0	2.7775
11.0	2.7746
12.0	2.7714
13.0	2.7679
14.0	2.7639

Abbe number	
$\lambda$ ( $\mu\text{m}$ )	$\nu$
3-5	168
8-12	159

Thermo-optic coefficient (-40-100 °C)	
$\lambda$ ( $\mu\text{m}$ )	dn/dt
10	35 ppm/K

Transmittance (10 mm)	
$\lambda$ ( $\mu\text{m}$ )	$\tau$ (%)
2.0	63.4
3.0	62.3
4.0	62.8
5.0	62.7
6.0	62.6
7.0	62.7
8.0	63.1
9.0	63.2
10.0	63.1
11.0	63.2
12.0	62.9
13.0	54.7
14.0	43.0

Refractive index tolerance:  
 $\pm 0.001$

### Size of Supply:

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

