

# Infrared Chalcogenide Glasses IG6

Custom sizes and specifications are available

**COMPOSITION** As<sub>40</sub>Se<sub>60</sub>

## OPTICAL

Transmission Range, microns 1.5-12  $\mu\text{m}$

## MATERIAL PROPERTIES

Density 4.63 g/cm<sup>3</sup>  
Hardness (Knoop) 1.04 GPa  
Rupture Modulus 17 MPa  
Young's Modulus 18.3 GPa  
Shear Modulus 8.0 GPa  
Dispersion 168 (4 $\mu\text{m}$ )  
161 (10.6 $\mu\text{m}$ )

## THERMAL

Thermal Expansion 20.7 x 10<sup>-6</sup>/K  
Specific Heat 0.36 J/gK  
Thermal Conductivity 0.24 W/mK  
Transition Temperature 185°C  
Thermal change dn/dT 35 x 10<sup>-6</sup>/K (3.4 $\mu\text{m}$ )  
41 x 10<sup>-6</sup>/K (10.6 $\mu\text{m}$ )

IG-6 is a registered trademark of Vitron

## IR Refractive Index of IG-6

$\mu\text{m}$	Index
1.0	2.9314
1.5	2.8462
2.0	2.8200
3.0	2.8017
4.0	2.7948
5.0	2.7910
6.0	2.7882
7.0	2.7857
8.0	2.7833
9.0	2.7808
10.0	2.7781
11.0	2.7753
12.0	2.7721

