

# AMTIR-2

Custom sizes and specifications are available

## COMPOSITION

As 40% – Se 60%

## OPTICAL

Ref Index @ 10  $\mu\text{m}$  2.7691  
Transmittance range, microns 1.0-14  
Transmittance at 1  $\mu\text{m}$  T = 0.99999

## THERMAL

Resistivity  $15 \times 10^9$  ohm-cm  
Thermal Expansion  $22.4 \times 10^{-6}$  m/m $^{\circ}\text{C}$   
Glass Trans Temp ( $T_g$ ) 167  
Softening Point 188  $^{\circ}\text{C}$   
Specific Heat 0.068  
Thermal Conductivity  $5.3 \times 10^{-4}$  cal gm /  $^{\circ}\text{C}$  sec  
D N / D T @ 1.5  $\mu\text{m}$  +  $117 \times 10^{-6}$  /  $^{\circ}\text{C}$   
D N / D T @ 4  $\mu\text{m}$  +  $31 \times 10^{-6}$  /  $^{\circ}\text{C}$   
D N / D T @ 10  $\mu\text{m}$  +  $30.7 \times 10^{-6}$  /  $^{\circ}\text{C}$

## MECHANICAL

Density 4.66 gm/cm $^3$   
Knoop Hardness 110  
Rupture Modulus 2500 psi  
Young's Modulus E  $5.6 \times 10^6$  psi  
Poisson's Ratio 0.29  
Specific gravity 4.4  
Shear Modulus G  $1.03 \times 10^6$  psi  
Tensile Strength 1440 psi  
Compressive Strength 8800 psi  
Dielectric Constant 9.1

AMTIR-2 is a registered trademark of Amorphous Materials.

## IR Refractive Index of Amtir-2

$\mu\text{m}$	Refractive Index	Absorption Coefficient ( $\text{cm}^{-1}$ )
1.0	2.9221	0.056
1.064	2.9023	0.040
1.25	2.8638	0.023
1.5	2.8351	0.016
1.75	2.8186	0.015
2.0	2.8082	0.015
3.0	2.7897	0.01
4.0	2.7830	0.01
5.0	2.7796	0.02
6.0	2.7773	0.01
7.0	2.7753	0.01
8.0	2.7735	0.01
9.0	2.7714	0.01
10.0	2.7691	0.01
11.0	2.7662	0.016
12.0	2.7626	0.031
13.0	2.7577	0.22

