

# Thallium Bromiodide KRS-5 (TIBr-TII)

Custom sizes and specifications are available

## CRYSTALLOGRAPHIC

Syngony Cubic  
Symmetry Class m3m Pm3m  
Lattice Constants, Angstrom a=0.4125

## OPTICAL

Refractive Index at  $n_{10.0}$  2.37  
Transmission Range, microns 0.6-40

## THERMAL

Thermal Linear Expansion, deg C<sup>-1</sup> for 0/+20 deg C  $6 \times 10^{-6}$   
Thermal Conductivity, W/(m•deg C) at 25 deg C 0.54  
Specific Heat Capacity, J/(kg•deg C)  $0.151 \times 10^3$   
Melting Point, deg C 414.5

## MECHANICAL

Density, g/cm<sup>3</sup> at 20 deg C 7.371  
Vickers Microhardness, Pa  $35 \times 10^7$   
Young Modulus (E), Pa  $3.1 \times 10^{10}$   
Shear Modulus (G), Pa  $1.2 \times 10^{10}$   
Poisson Ratio 0.37

## CHEMICAL

Molecular Weight 42 mole% TIBr / 58 mole% TII  
Solubility  
in water, gram/100 cm<sup>3</sup> 0.05  
in acids soluble

## Refr. Index n vs. Wavelength $\lambda$

WAVELENGTH, MICRONS	REFRACTIVE INDEX
0.6	2.60
1.0	2.45
2.0	2.40
4.0	2.38
6.0	2.38
8.0	2.37
10.0	2.37
20.0	2.34
30.0	2.29
40.0	2.21

## Transmittance $\tau$ ( $\lambda$ ) vs. Wavelength $\lambda$

