Mateck Cesium Iodide, CsI

Category : Ceramic , Halide

Material Notes:

Optical crystals

Order this product through the following link:
http://www.lookpolymers.com/polymer_Mateck-Cesium-Iodide-CsI.php

Physical Properties	Metric	English	Comments
Density	4.509 g/cc	0.1629 lb/inÂ³	
Solubility	44 ppm	44 ppm	
a Lattice Constant	4.567 Ã…	4.567 Ã…	
Molecular Weight	259.81 g/mol	259.81 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	1.0 - 2.0	1.0 - 2.0	
Modulus of Elasticity	2.00 GPa	290 ksi	
Poissons Ratio	0.214	0.214	
Shear Modulus	6.24 GPa	905 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	48.1 Âµm/m-Â°C @Temperature 0.000 - 30.0 Â°C	26.7 Âµin/in-Â°F @Temperature 32.0 - 86.0 Â°F	
Specific Heat Capacity	0.200 J/g-Â°C	0.0478 BTU/lb-Â°F	
Thermal Conductivity	1.10 W/m-K @Temperature 25.0 Â°C	7.63 BTU-in/hr-ftÂ²-Â°F @Temperature 77.0 Â°F	
Melting Point	621 Â°C	1150 Â°F	

Optical Properties	Metric	English	Comments
Refractive Index	1.678	1.678	n40.0
	1.74	1.74	n10.0
	1.611	1.611	

Optical Properties	Metric	English	Comments
	@Wavelength 55000 nm	@Wavelength 55000 nm	
	1.708 @Wavelength 30000 nm	1.708 @Wavelength 30000 nm	
	1.747 @Wavelength 2000 nm	1.747 @Wavelength 2000 nm	
	2.21 @Wavelength 250 nm	2.21 @Wavelength 250 nm	
Transmission, Visible	84 % @Wavelength 600 nm	84 % @Wavelength 600 nm	Internal Transmittance
IR Transmittance	11 % @Wavelength 60000 nm	11 % @Wavelength 60000 nm	Internal Transmittance
	85 % @Wavelength 30000 nm	85 % @Wavelength 30000 nm	Internal Transmittance
UV Transmittance	10 % @Wavelength 250 nm	10 % @Wavelength 250 nm	Internal Transmittance

Descriptive Properties	Value	Comments
Absorption loss (cm^-1)	0.1	at 40 microns
	0.33	at 45 microns
	0.5	at 50 microns
Symmetry Class	m3m, Pm3m	
Syngony	cubic	
Thermal Coefficient of Refractive Index	-1.27E-5 to -1.51E-5	
Transmission Range (microns)	0.25 - 55	

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