

Mateck Cadmium Telluride (CdTe)

Category : Ceramic , Sulfide/Chalcogenide

Material Notes:

Optical crystals

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mateck-Cadmium-Telluride-CdTe.php

Physical Properties	Metric	English	Comments
Density	5.86 g/cc	0.212 lb/in ³	
Solubility	0.00 ppm	0.00 ppm	
a Lattice Constant	6.483 Å...	6.483 Å...	
Molecular Weight	240.01 g/mol	240.01 g/mol	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	52.0 GPa	7540 ksi	
Poissons Ratio	0.41	0.41	
Shear Modulus	18.4 GPa	2670 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	4.50 Åµm/m-Å°C	2.50 Åµin/in-Å°F	
	@Temperature 0.000 - 30.0 Å°C	@Temperature 32.0 - 86.0 Å°F	
Specific Heat Capacity	0.209 J/g-Å°C	0.0500 BTU/lb-Å°F	
Thermal Conductivity	4.10 W/m-K	28.5 BTU-in/hr-ftÅ²-Å°F	
Melting Point	1092 Å°C	1998 Å°F	

Optical Properties	Metric	English	Comments
Refractive Index	2.61	2.61	n20.0
	2.649	2.649	n10.0
	2.598	2.598	
	@Wavelength 22000 nm	@Wavelength 22000 nm	
	2.629	2.629	

Optical Properties	Metric	English	Comments
	@Wavelength 16000 nm	@Wavelength 16000 nm	
	2.649	2.649	
	@Wavelength 10000 nm	@Wavelength 10000 nm	
	2.656	2.656	
	@Wavelength 6000 nm	@Wavelength 6000 nm	
IR Transmittance	10 %	10 %	Internal Transmittance
	@Wavelength 800 nm	@Wavelength 800 nm	
	15 %	15 %	Internal Transmittance
	@Wavelength 35000 nm	@Wavelength 35000 nm	
	55 %	55 %	Internal Transmittance
	@Wavelength 950 nm	@Wavelength 950 nm	
	70 %	70 %	Internal Transmittance
	@Wavelength 15000 nm	@Wavelength 15000 nm	

Descriptive Properties	Value	Comments
Absorption loss (cm ⁻¹)	0.167	at 10 microns
Symmetry Class	F43m	
Syngony	cubic	
Transmission Range (microns)	2 - 25	

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