

## Mateck Gallium Arsenide (GaAs)

Category : Ceramic , Phosphide/Pnictide , Other Engineering Material , Semiconductor

### Material Notes:

Optical crystals

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Mateck-Gallium-Arsenide-GaAs.php](http://www.lookpolymers.com/polymer_Mateck-Gallium-Arsenide-GaAs.php)

Physical Properties	Metric	English	Comments
Density	5.316 g/cc @Temperature 20.0 °C	0.1921 lb/in <sup>3</sup> @Temperature 68.0 °F	
Solubility	0.00 ppm	0.00 ppm	
a Lattice Constant	5.653 Å...	5.653 Å...	
Molecular Weight	144.64 g/mol	144.64 g/mol	

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	6900	6900	MPa
Hardness, Mohs	4.5	4.5	
Modulus of Elasticity	85.0 GPa	12300 ksi	
Poissons Ratio	0.31	0.31	
Shear Modulus	32.4 GPa	4700 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	5.39 µm/m-°C @Temperature 0.000 - 30.0 °C	2.99 µin/in-°F @Temperature 32.0 - 86.0 °F	
Specific Heat Capacity	0.350 J/g-°C	0.0837 BTU/lb-°F	
Thermal Conductivity	46.05 W/m-K @Temperature 25.0 °C	319.6 BTU-in/hr-ft <sup>2</sup> - °F @Temperature 77.0 °F	
Melting Point	1238 °C	2260 °F	

Optical Properties	Metric	English	Comments
Refractive Index	3.34	3.34	n8.0

Optical Properties	Metric	English	Comments
	@Wavelength 19000 nm	@Wavelength 19000 nm	
	2.82	2.82	
	@Wavelength 14500 nm	@Wavelength 14500 nm	
	3.34	3.34	
	@Wavelength 8000 nm	@Wavelength 8000 nm	
IR Transmittance	1.0 %	1.0 %	Internal Transmittance
	@Wavelength 900 nm	@Wavelength 900 nm	
	2.0 %	2.0 %	Internal Transmittance
	@Wavelength 15000 nm	@Wavelength 15000 nm	
	55 %	55 %	Internal Transmittance
	@Wavelength 1500 nm	@Wavelength 1500 nm	
	60 %	60 %	Internal Transmittance
	@Wavelength 10000 nm	@Wavelength 10000 nm	

Descriptive Properties	Value	Comments
Absorption loss (cm <sup>-1</sup> )	0.26	at 8.0 microns
Symmetry Class	43m F43m	
Syngony	cubic	
Transmission Range (microns)	1 - 15	

## Contact Songhan Plastic Technology Co.,Ltd.

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