

Gallium Arsenide (GaAs)

CRYSTALLOGRAPHIC

Syngony	Cubic
Symmetry Class	43m F43m
Lattice Constant, Angstrom	5.653

OPTICAL

Refractive Index at n_{80}	3.2884
Transmission Range, Microns	1 - 15

Absorbance μ (□), cm ⁻¹ at 10.6 microns	0.01
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THERMAL

Thermal Linear Expansion, deg C ⁻¹ for 0-30 deg C	5.39 x 10 ⁻⁶
Thermal Conductivity, W/(m * deg C) at 25 deg C	46.05
Specific Heat Capacity, J/(kg * deg C)	350
Melting Point, deg C	1238

MECHANICAL

Density, g/cm ³ at 20 deg C	5.316
Mohs Hardness	4.5

Vickers Microhardness, Pa	6.9 x 10 ⁹
Young Modulus E, Pa	85 x 10 ⁹
Poisson Ratio	0.31

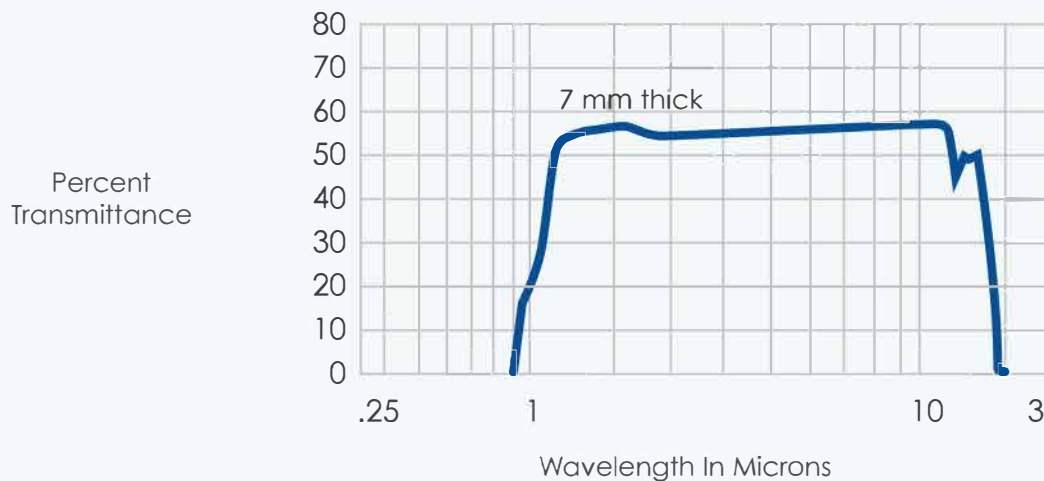
CHEMICAL

Molecular Weight	144.64
Solubility in water, gram/100cm ³	insoluble

Refr. Index n vs. Wavelength λ

WAVELENGTH, MICRONS	REFRACTIVE INDEX
7.0	3.2927
8.0	3.2884
9.0	3.2838
10.0	3.2786
11.0	3.2729
12.0	3.2667

Transmittance τ (λ) vs. Wavelength λ



For Reference Only

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