

Silicon (Si)

Custom sizes and specifications are available

CRYSTALLOGRAPHIC

Syngony	Cubic
Symmetry Class	m3m Fd3m
Lattice Constants, Angstrom	$a = 5.43089$

OPTICAL

Refractive Index at $n_{3,0}$	3.436
Refractive Index at $n_{5,0}$	3.426
Thermal Coefficient of Refractive Index at 25 deg C	1.50×10^{-4}
Transmission Range, Microns	1.2-10, 50-100

THERMAL

Thermal Linear Expansion, deg C ⁻¹ for 25 deg C	2.55×10^{-6}
Thermal Conductivity, W/(m * deg C) at 27 deg C	159
Specific Heat Capacity, J/(kg * deg C)	0.712×10^3
Melting Point, deg C	1412

MECHANICAL

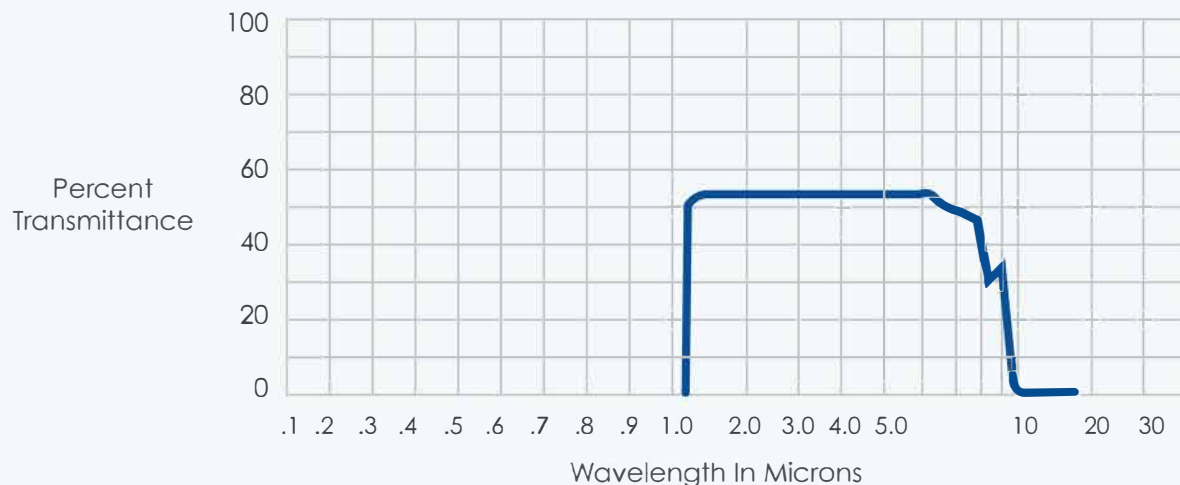
Density, g/cm ³ at 20 deg C	2.329
Mohs Hardness	7
Young Modulus E, Pa	1.89×10^{10}
Shear Modulus (G), Pa	7.99×10^{10}
Poisson Ratio	0.266

CHEMICAL

Molecular Weight	28.09
Solubility	insoluble
in water, gram/100cm ³	

Refr. Index n vs. Wavelength λ	
WAVELENGTH, MICRONS	REFRACTIVE INDEX
1.5	3.484
2.0	3.456
3.0	3.436
4.0	3.429
5.0	3.426
6.0	3.424
7.0	3.423
8.0	3.422
9.0	3.422

Transmittance τ (λ) vs. Wavelength λ



For Reference Only

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