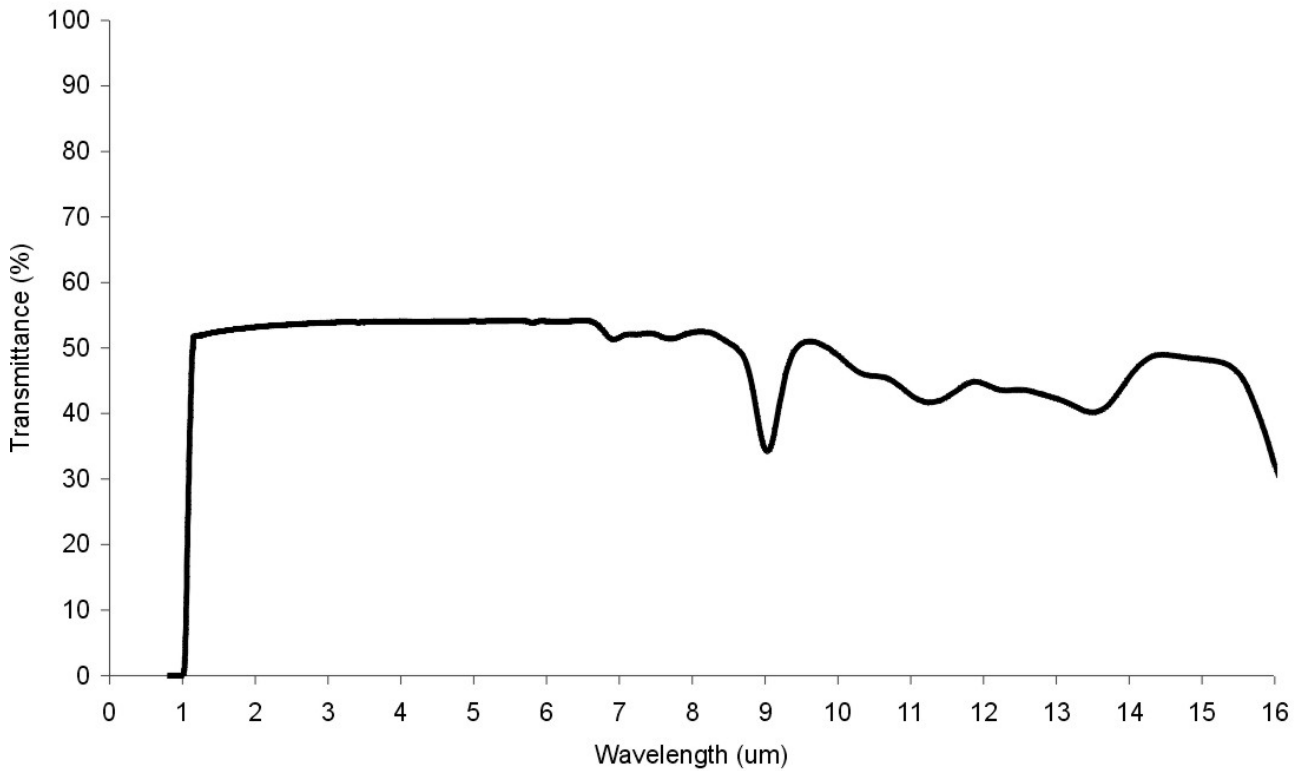




DATA SHEET

SILICON (Si)

MATERIAL: Silicon – Optical Grade - Monocrystalline
SPECTRAL DATA: Transmission Standard Optical Grade
≥ 52% @ 3-5 microns
1mm thick



CHEMICAL & PHYSICAL PROPERTIES

Appearance / odor	Steel grey crystal or powder no odor
Boiling point	2355 C / 4271F
Vapor pressure	Not applicable
Solubility in water	Insoluble
Specific gravity	2.33
Melting point	1410 C / 2570 F

PROPERTIES OF SILICON

Symbol	Si
Atomic No	14
Atomic weight	28.086
Atomic density at 20°C, cm ⁻³	5.00 x 10 ²²
Atomic volume at 20°C, cm ³ /g-atom	12.057
Lattice parameter at 23°C, Å	5.43089 ± 0.00016
Crystal structure	Diamond cubic
Density at 25°C, g/cm ³	2.329
Hardness, mohs scale	7
Melting point °C	1412
Boiling point °C	2878
Heat of sublimation at m.p kcal/g	4.075
Heat of vaporization at m.p, kcal/g	3.812
Vapor pressure at m.p, mmHg	2.8 x 10 ⁻³
Heat of fusion at m.p, cal/g	264
Solid heat capacity at 25°C, cal/(mole•K)	4.78
Liquid heat capacity at m.p, cal/(mole•K)	6.755
Liquid density at m.p, gm/cm ³	2.533
Surface tension at m.p, dynes/cm	736
Liquid viscosity at m.p, centipoises	0.88
Linear thermal expansion coefficient at 25°C, K ⁻¹	2.55 x 10 ⁻⁶
dN/dT	1.50 x 10 ⁻⁴ K ⁻¹

WHILE EVERY ATTEMPT HAS BEEN MADE TO VERIFY THE SOURCE OF THE INFORMATION, NO RESPONSIBILITY IS ACCEPTED FOR ACCURACY OF DATA.

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