

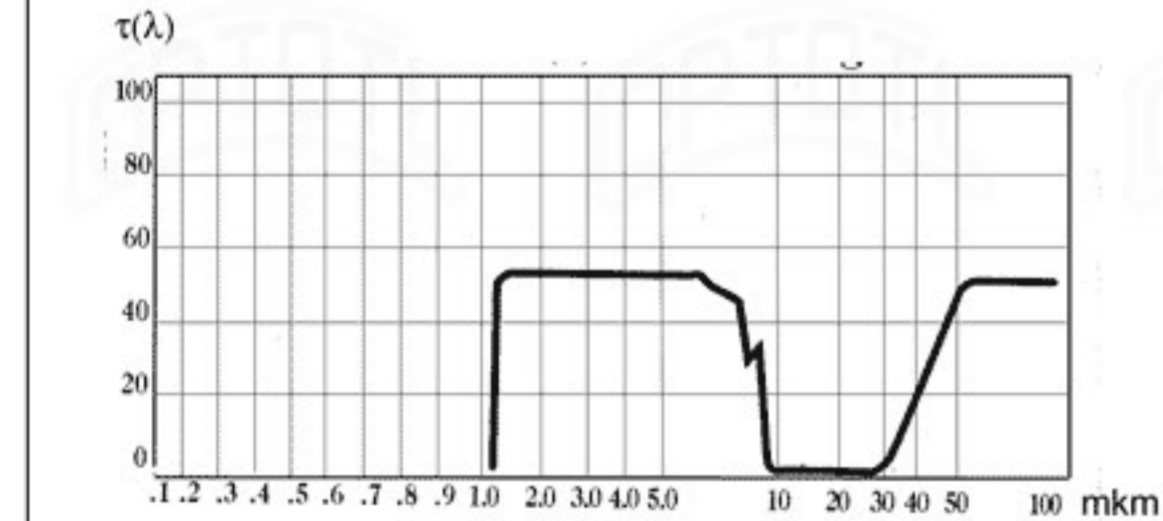
Crystallographic Si (Silicon)

Syngony	Cubic
Symmetry Class	m3m Fd3m
Lattice Constants, Angstroms	a=5.43089 c=a

Optical Si (Silicon)

Refractive Index at $n_{3,0}$	3.436
Refractive Index, $n_{5,0}$	3.426
Thermal Coefficient of Refractive Index at $l=3.39$ microns, $^{\circ}\text{C}^{-1}$ at 25°C	$1.5 \cdot 10^{-4}$
Transmission Range, microns (thickness 10mm)	1.2, 10, 50, 100

Transmittance $t_t(l)$ vs. wavelength l Si (Silicon)



Refractive Index n vs. wavelength l Si (Silicon)	
l, MKM	n(l)
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

Thermal Si (Silicon)

Thermal Linear Expansion a_t , $^{\circ}\text{C}^{-1}$ for 25°C	$2.55 \cdot 10^{-6}$
Thermal Conductivity, $\text{W}/(\text{m} \cdot ^{\circ}\text{C})$ at 27°C	159
Specific Heat Capacity, $\text{J}/(\text{kg} \cdot ^{\circ}\text{C})$	712.8
Melting Point, $^{\circ}\text{C}$	1412

Mechanical Si (Silicon)

Density, g/cm^3 at 25°C	2.329
Mohs Hardness	7
Poisson Ratio	0.266
Young Modulus (E), Pa	$1.89 \cdot 10^{10}$
Shear Modulus (G), Pa	$7.99 \cdot 10^{10}$

Chemical Si (Silicon)

Solubility	
in water $\text{g}/100\text{cm}^3$	
insoluble	