

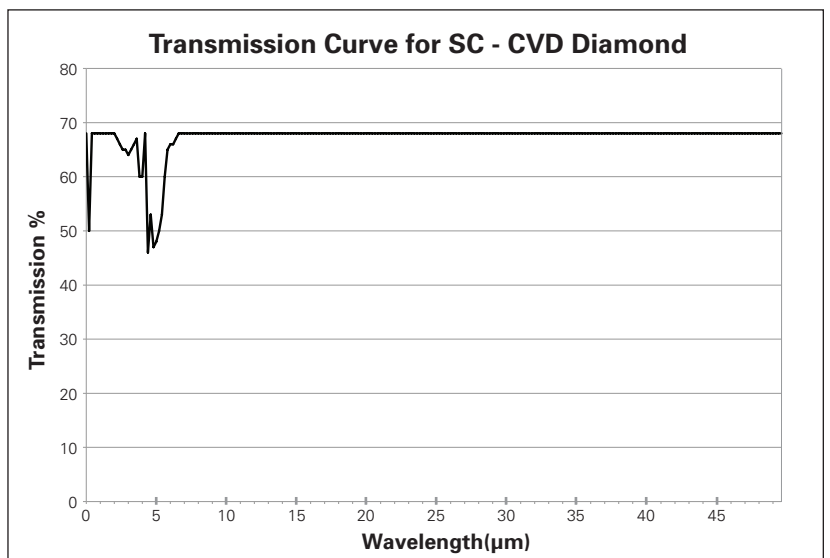
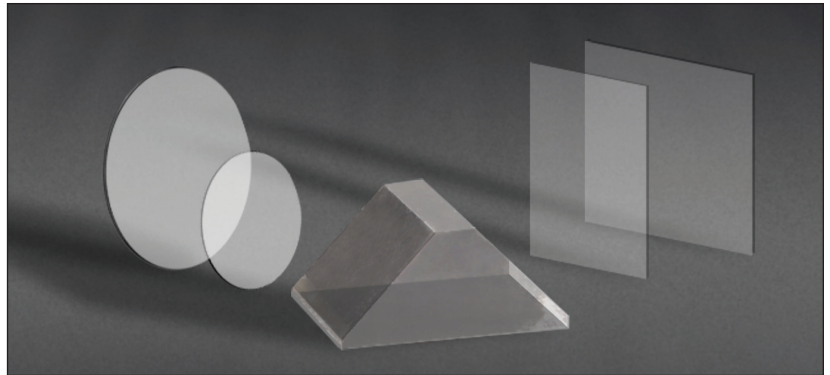
Optical Properties	Value
Refractive Index	2.417 at 500 nm 2.38 at 10 μ m
Optical Dispersion	0.044
Nitrogen Content	< 1 ppm

Electrical Properties	Value
Electrical Resistivity	> 10^{16} ohm-cm
Dielectric Strength	10^6 V/cm

Thermal Properties	Value
Heat Capacity (20°C)	1.478 cal/g°K
Thermal Conductivity	2200 w/mk
Graphitization in inert atmosphere (or vacuum)	@ 1500°C
Oxidation	@ 600°C

Mechanical Properties	Value
Strength, Compression	>110GPa
Strength, Fracture	1000MPa
Strength, Tensile	0.5-1.4GPa
Atom Density	1.77×10^{23} /cm ³
Young's Modulus	1050GPa
Poisson's Ratio	0.1-0.29
Hardness (Knoop)	90GPa
Density	3.515gm/cm ³
Coeff. of Friction	0.035-0.30

Capabilities	Specs
Thickness	20nm - 2mm
Diameter	up to 5mm
Roughness	<2nm Ra
Flatness	1/4 fringe/cm (633nm)
Many shapes are available – wedges, pyramids, trapezoids, prisms, cylinders, etc.	



Electronic Properties	Value
Sound Velocity (20°C)	1750 m/sec
Debye Temperature (0-800°C)	1860°K
Dielectric Constant 45MHz-20GHz	5.7
Band Gap	5.47 eV

