

Mechanical Properties

Density	3.97g/cm³
Vickers Hardness to c-axis	1940
Vickers Hardness ⊥ to c-axis	2200
Tensile Strength	60,000 psi
Compressive Strength	300,000 psi
Young's Modulus	74 x 10⁶ psi
Poisson Ratio	0.28

Thermal Properties

Melting Point	2050°C
Thermal Conductivity	32W/Mk (@258°C)
Specific Heat	1.99 J/cm³°C

Electrical Properties

Resistivity	@25°C > 10¹⁸ ohm cm @500°C > 10¹² ohm cm
Dielectric Constant	Perpendicular to C axis 9.3 (KHz-I GHz, 25°) Parallel to C axis 11.5 (KHz-I GHz, 25°)
Dielectric Strength	480,000 v/cm

Optical Properties

Near and Mid-wave IR transmission	>86%
UV transmission	>70%
Refractive Index	1.83 @ 0.26 μm 1.76 @ 0.63 μm 1.58 @ 05.57 μm
Birefringence	0.0087 @ 0.55 μm