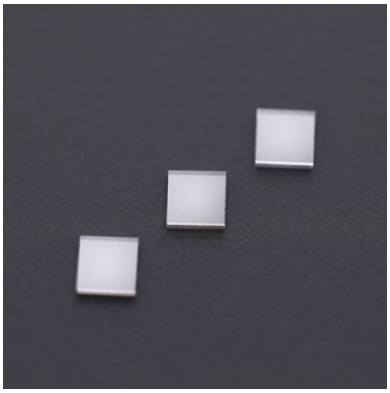
WD Advanced Materials

Authorized Distribution Partner

Hi-Rel



OPTICAL GRADE CVD DIAMOND

Semi- to- fully-polished low-defect and low-stress single crystal diamond substrates for use in a variety of applications, including high-power electronics and surgical blades.

> High-quality CVD substrates; inquire for Standard Grade alternative
> Available at scale to exact customer sizing and polish requirements
> Bulk Material per customer specifications

MATERIAL SPECIFICATIONS	
Thermal Conductivity	2200 W/(m·K)
Hardness	>8 MPa·m
Crystal Structure	Cubic
Lattice Constant	3.567 Å
Density	3.51 ± 0.01 g/cm^3
Refractive Index	2.418 (at 500 nm)
^{13}C Fraction	1.1%
Orientation	*Primary:* (100), (110), (111)
	Secondary: (100) or (110)
Dimensions	Square, round, cylinders / cones
	Up to 10mm *(length, width)*
	0.300-9mm *(thickness) (other values available upon request)*
Roughness, Ra	Laser Cut, Optical Polish (<20nm Ra), Epi-Ready Polish (<5nm Ra), Fine Polish (<2nm Ra)
Appearance	Clear / White
Nitrogen Levels	<5ppm N2

All diamond substrates are grown at the WD Advanced Materials facility in the United States. For custom requests and to discuss capabilities outside of the specifications noted here, please reach out to your account management team at the Hi-Rel Group.