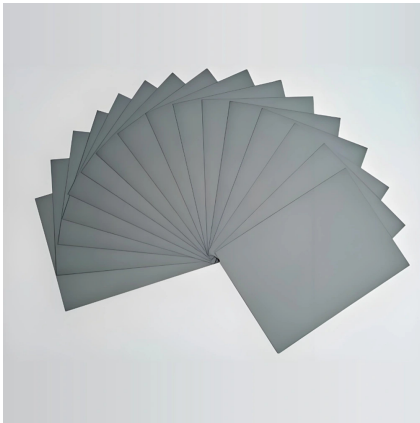




Bare silicon nitride ceramic substrate sheets

Bare Silicon Nitride Ceramic Substrate Sheets

Product ID / SKU: FWM/CS-SN-001

Material: Silicon Nitride

Product type: Ceramic Substrate

High-strength Si₃N₄ substrate sheets for reliability-focused power electronics and severe thermal-cycling applications.

Si₃N₄ Substrate (Sinalit) Properties

Property	Sinalit - bare Si ₃ N ₄ substrate	Conditions / ±10% measurement tolerance (except ref.)
Density (g/cm ³)	≥3.22	DIN EN 993-1
Bending strength (MPa)	≥700	-
Fracture toughness (MPa·m ^{1/2})	≥6.5	Indentation-fracture method
Thermal conductivity (W/(m·K))	90	Room temperature; DIN EN 821-2
Coefficient of thermal expansion (10 ⁻⁶ /K)	3.3 (ref.)	100-800°C; DIN 51045-1
Dielectric strength (kV/mm)	≥25	20°C; AC / DC; DIN EN 60243-1
Volume resistivity (Ω·cm)	≥10 ¹⁴	Room temperature; IEC 62631-3
Young's modulus (GPa)	≥280	ASTM C1259-15
Specific heat capacity (J/(g·K))	≥0.68	25°C; DIN EN 821-3 Method B
Relative permittivity	7.8 (ref.)	Room temperature; 1 MHz; Ra ≤0.4 μm; ASTM D150
Dielectric loss tangent	≤0.003	Room temperature; 1 MHz; Ra ≤0.4 μm; ASTM D150