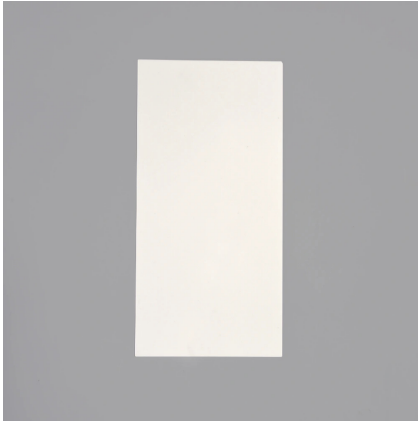




White alumina ceramic insulating plate

Alumina Ceramic Substrates for Thermoelectric Modules

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

Material: Alumina

Product type: Ceramic Substrate

96% alumina insulating substrates for thermoelectric module assembly, reviewed for outline, thickness, surface condition and circuit requirements.

96% Alumina Substrate (708 S) Properties

Property	96% Al ₂ O ₃ - 708 S	Test conditions / measurement tolerance ±10%
Density (g/cm ³)	≥3.75	DIN EN 993-1
Bending strength, σ ₀ (MPa)	≥500	-
Young's modulus (GPa)	≥300	-
Thermal conductivity (W/(m·K))	24	Room temperature; DIN EN 821-2
Linear thermal expansion coefficient (10 ⁻⁶ /K)	7-9	100-800°C; DIN 51045-1
Specific heat capacity (J/(g·K))	≥0.75	20°C; DIN EN 821-3 method B
Relative permittivity	~9.8	Room temperature, 1 MHz; Ra ≤0.4 μm
Dielectric loss factor	≤0.005	Room temperature; 1 MHz; Ra ≤0.4 μm
Volume resistivity (Ω·cm)	≥10 ¹⁴	Room temperature; IEC 62631-3
Breakdown strength (kV/mm)	AC≥15; DC≥15	20°C; AC / DC
Fracture toughness (MPa·m ^{1/2})	≥3.0	Indentation-fracture (IF)