



Aluminium Nitride PCAN4000

PCAN₄₀₀₀ is one of our enhanced grades of aluminium nitride offering all the mechanical performance of PCAN₁₀₀₀ with the enhanced benefits of 200 W/(m·K) thermal conductance.

Key Properties

- No toxic issues of beryllia
- Good plasma resistance
- Excellent thermal shock performance

Precision Ceramics can supply components in prototype to production quantities with pressed, isopressed, machined and ground parts.

The improved performance of aluminium nitride over alumina with over five times the thermal conductance enables high performing devices to function faster and better in smaller devices.

Typical Applications

- Heat sinks
- Heat spreaders
- Laser heatsinks power rectifiers
- Aerospace, power electronics, rectifiers and medical components supplied to ISO9001/2015

Product Data

		PCAN4000
Colour		Light Grey
Purity, %wt (min)		95
Density, g/cm ³		3.30
Thermal Conductivity, W/m·K		200±20
Heat Capacity @ RT, J/g·K		0.736
Thermal Expansion Coefficient, x10 ⁻⁶ /°C	25°C	3.53
	300°C	4.55
	600°C	5.07
Dielectric Strength, kV/mm		≥70
Volume Resistivity, Ohm·cm		>10 ¹⁴
Dielectric Constant	1MHz	8.5
	2.6GHz	8.38
	10GHz	8.35
Loss Tangent	1MHz	0.001
	2.6GHz	0.007
	10GHz	0.005
Flexural Strength, MPa		300-350
Elastic Modulus, Gpa		320
Poisson's Ratio		0.22
Hardness, GPa		12
Fracture Toughness, MPa·m ^{1/2}		2.5

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