



Aluminium Nitride PCAN1000

PCAN1000 is our standard high purity aluminium nitride with a thermal conductivity of 170 W/(m·K). This is the same thermal performance as our substrate material but offers the possibility of larger pieces in length and width and in thicknesses up to 30mm.

Key Properties

- No toxic issues of beryllia
- Good plasma resistance
- Excellent thermal shock performance
- Good coefficient of thermal expansion - matched to silicon and gallium nitride over wide temperature ranges

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 on thermal management enables higher power components to deliver an enhanced product all backed with Precision Ceramics reliability and consistency of supply.

Typical Applications

- High power insulators
- Laser components
- Water cooled heatsinks
- Power electronics
- Aerospace, medical and semiconductor components supplied to ISO9001/2015

Product Data

PCAN1000		
Thermal Conductivity	W/M·K	170
Heat Radiation	(100°C)	0.93
Thermal Expansion Coefficient	10 ⁻⁶ /°C (RT-400 °C)	4.5
Insulation Resistance	Ω cm(RT)	>10 ¹³
Dielectric Voltage	kV/mm(RT)	15
Dielectric Constant	(1MHz)	8.8
Dielectric Loss	10 ⁻⁴ (1MHz)	5
Bending Strength	MPa	350
Density	g/cm ³	3.32
Yttria	%	3.4
Oxygen	%	1.7

www.precision-ceramics.co.uk
Advanced Technical Ceramic Solutions



PRECISION CERAMICS

86 Lower Tower Street, Birmingham B19 3PA, England
Tel: +44 (0) 121 687 5858 Fax: +44 (0) 121 687 5857
Email: info@precision-ceramics.co.uk
www.precision-ceramics.co.uk