

Aluminium Nitride Ceramics

Introduction 产品简介

Aluminum nitride is a new type of ceramic material with excellent comprehensive performance. It has excellent thermal conductivity and thermal shock resistance, reliable electrical insulation. Because of the liquid phase sintering and no second phase at the grain boundary, the crystal structure is very dense and has good Resistance to plasma corrosion. A series of excellent characteristics such as low dielectric constant and dielectric loss, non-toxic and thermal expansion coefficient matching silicon, are considered to be ideal materials for a new generation of highly integrated semiconductor substrates and electronic device packaging, and are widely used at home and abroad attention.

氮化铝是一种综合性能优良的新型陶瓷材料，具有优良的热传导性和抗热震性，可靠的电绝缘性，因液相烧结且晶界无第二相，晶体结构非常致密，具有良好的抗等离子体腐蚀能力。低的介电常数和介电损耗，无毒以及与硅相匹配的热膨胀系数等一系列优良特性，被认为是新一代高集成度半导体基片和电子器封装的理想材料，受到国内外的广泛关注。

主要特征 Prime Features:

- High thermal conductivity 高热导率
- Excellent thermal shock resistance 抗热震性
- Excellent insulation, >15KV / cm 优异的绝缘性，大于 15KV/cm
- Plasma etching resistance 耐等离子体刻蚀性
- Good shock resistance 耐冲击性好

- Non-toxic 无毒
- Excellent mechanical properties 优异的力学性能

Application 应用:

- IC packaging IC 封装
- Components for semiconductor equipment 半导体设备用零部件
- Thermal module substrate 热模块基板
- High power transistor module substrate 大功率晶体管模块基板
- High frequency device substrate 高频装置基板
- Exothermic insulation board for Thyristor Modules 晶闸模块用放热绝缘板
- Semiconductor laser, fixed substrate for light emitting diode (LED)

半导体激光, 发光二极管用固定基板 (LED)

- Hybrid integrated module, ignition device module

混合集成模块, 点火装置模块

Material Properties 材料性能

Properties 性能	单位	AN-210	AN-170
Density 密度	(g/cm ³)	3.33	3.32
Thermal conductivity 热导率	(W/m.K)	210	170
Bending strength 抗弯强度	(Mpa)	300	410
Insulation 绝缘耐压	(KV/mm)	27	31
Dielectric 介电常数		8.9	8.8
CTE (10-6) 热膨胀系数		4.9	4.6

Product information 产品信息

Regular Specification of substrate 基板常规尺寸								
L /W 长/宽	25.4mm	50.8mm	63.5mm	76.2mm	101.6mm	114.3mm	127mm	152.4mm
	Tolerance 公差: ±1mm							
Thickness 厚度	1mm							
	1.5mm							
	2mm							
	Tolerance 公差 :±5%							

According to the customer's requirements for aluminum nitride components, we organically combine the most suitable process with our commitment to our customers to ensure that our material solutions meet demanding specifications while providing excellent performance.

根据客户对氮化铝部件的要求，我们将最适合的工艺与对客户的承诺有机结合，确保我们的材料解决方案满足苛刻的规格，同时提供卓越的性能。

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