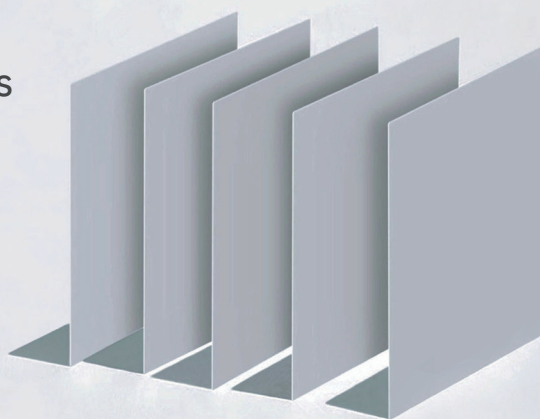




Silicon nitride ceramic sheet

Provide reliable core solutions
for high-performance
electronic heat dissipation

HIGH thermal conductivity
HIGH insulation
Thermal Conductivity
85W



30+

Specially focus on copper
bonded ceramic substrate
process R&D about 30 years

300+

More than 300 patents

20+

The sales network covers
more than 20 countries

360°

"360° One-stop"
group service

Product introduction

Ferrotec silicon nitride ceramic sheet adopts advanced preparation technology, which not only retains the high hardness, high wear resistance, high thermal stability and good chemical inertness of silicon nitride, but also optimizes the microstructure and performance, with higher strength, toughness and thermal conductivity.

Application fields

Power modules, Automotive electronics, LED lighting, 5G communication, etc.

Features

- ① Excellent high thermal conductivity: the thermal conductivity can reach above 80W/(m·K)
- ② Excellent mechanical strength: the bending strength can reach above 800MPa
- ③ High electrical insulation
- ④ Low thermal expansion coefficient
- ⑤ High fracture toughness

Characteristic Values

Item	Unit	Typical value	
Material	-	Si ₃ N ₄	
Color	-	grey	
Density	g/cm ³	3.20	
Surface roughness Ra	μm	0.35	
Mechanical	Bending strength	MPa	800
	Modulus of elasticity	GPa	300
	Vickers hardness	GPa	14.0
	Fracture toughness	MPa · m ^{1/2}	6.5
Thermal	Coefficient of Thermal Expansion (20°C-400°C)	10 ⁻⁶ /K	2.6
	Thermal conductivity (25°C)	W/(m · K)	80
	Specific heat	J/(kg · K)	680
Electrical	Dielectric constant (1MHz)	-	7.8
	Dielectric loss factor (1MHz)	10 ⁻³	1.0
	Volume resistivity	Ω · cm	≥10 ¹⁴
	Breakdown strength (AC)	kV/mm	>20

NOTE: The above data are typical values only and do not represent the specification values.

General Dimension

Item	Unit	Specification
Standard Size	mm	190*138
	Tolerance	±1.0%
Thickness	mm	0.25 0.32
	Tolerance	±0.02/±0.03
Warpage	mm	≤0.25%*L