

Material characteristics

Material

Siliciumnitrid ceramics

Type

N-105

Short description

hot pressed Si₃N₄ (HPSN)

Table of Characteristics

Density	g/cm ³	3,2
Porosity	%	0
Average Grain Size	µm	5

Mechanical Properties

Bending Strength (4 pt.)	MPa	850
Modulus of Elasticity	GPa	320
Fracture Toughness	MPa m ^{1/2}	6,0

Thermal Properties

Maximum Working Temperature	°C	to 1300
Coefficient of Thermal Expansion (20 - 1000° C)	10 ⁻⁶ K ⁻¹	3,2
Thermal Conductivity at 100 °C	W/mK	35

Electrical Properties

Specific Resistance at 20° C	Ωcm	10 ¹⁰
Dielectric Strength	kV/mm	-

These values are typical ceramic material properties and may vary according to product configuration and manufacturing process.