

Properties of Aluminum Nitride Ceramic Substrates - SU0985

Project		Test Conditions	Unit	AlN
				AN-170
Material		-	-	AlN
Appearance		-	-	Light Blue
Surface Roughness		Ra	μm	0.2~0.75
Density		-	g/cm ³	≥3.3
Physical Properties	Bending Strength	3-Point Bending Resistance	MPa	≥400
	Vickers Hardness	Load 4.9	GPa	≥10
	Water Absorption	-	%	-
Thermal Performance	Thermal Conductivity	25°C	W/(m·k)	≥170
	Linear Thermal Expansion Coefficient	25°C~500°C	1×10 ⁻⁶ mm/°C	4~6
	Thermal Shock Resistance	800°C	Time	≥10
Electrical Properties	Specific Heat	-	J/(kg·K)	720
	Dielectric Constant	1MHz/25°C	-	8~9
	Dielectric Loss	1MHz/25°C	×10 ⁻⁴	≤3
	Volume Resistivity	25°C	Ω·cm	>10 ¹⁴
	Breakdown Voltage	-	KV/mm	>17

Remark: The value is just for review. Different working conditions may cause some difference.