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Material Specification Data Sheet

**SILICON NITRIDE (Si<sub>3</sub>N<sub>4</sub>)**

Semixicon Material No.			SXN201	SXN202	SXN301
Appearance			Dense		
Color			Black	Black	White
Main Characteristics			High Temperature Strength Wear Resistant Excellent Thermal Shock Resistance Light Weight		
Density	g/cm <sup>3</sup>	ASTM D2395	3.2±0.25	3.2±0.25	3.2±0.25
Vickers Hardness	Gpa	ASTM E18	≥1560	≥1650	≥1560
Flextural Strength	Mpa	ASTM C78	700~800	800~900	700~800
Fracture Toughness	Mpa m <sup>1/2</sup>	ASTM E1820	6.0~7.0	7.0~8.0	6.0~7.0
Young's Modulus	GPA	ASTM E111	300~320	300~320	300~321
Poisson's Ration	-	ASTM E132	≤0.29	≤0.29	≤0.29
Surface Roughness	Ra	ASTM D7127	≤0.8	≤0.8	≤0.8
Thermal Expansion	10 <sup>-6</sup> /°C	ASTM E831	6.0~7.0	7.0~8.0	6.0~7.0
Thermal Conductivity(20°C)	W/mk	ASTM E1225	≥85	≥35	≥85
Dielectric Strength	KV/mm	ASTM D149	12	13	12
Dielectric Constant	-	ASTM D229	8.5	9.2	8.5

※All data might subject to change without further notification ,please vefiry when needed

Rev:3.2