

Ultra-Stable Zirconia

Typical Properties – 12 mole% ceria sintering aid

	(Units)	(Typical)
Density	(g/cc)	6.20
Color		yellow
Grain Size, average	(um)	< 3
Thermal Conductivity	(W/m-K)	3 - 4
Thermal Expansion	(10exp-6/C)	7-10
Volume Resistivity (RT)	(Ohm-cm)	>10E13
Dielectric Loss	(RT, 1Mhz)	.001
Dielectric Constant	(RT, 100Khz)	30
Compressive Strength	(MPa)	2000
Bending Strength	(MPa)	550
Young's Modulus	(GPa)	200
Hardness	(GPa)	11 - 12
Fracture Toughness	(MPa-m ^{1/2})	12
As-Fired Surface Finish	(micro-meters)	0.5 – 0.4
Maximum use temperature	(C)	500