

High-Strength Zirconia

Typical Properties – 3 mole% yttria sintering aid (HIP'ed)

	(Units)	(Typical)
Density	(g/cc)	6.07
Color		Tan
Grain Size, average	(um)	1
Thermal Conductivity	(W/m-K)	2 - 3
Thermal Expansion	(10exp-6/C)	10
Heat Capacity	(J/Kg-K)	400
Volume Resistivity (RT)	(Ohm-cm)	>10E9
Dielectric Strength	(RT, kV/cm)	>69
Dielectric Constant	(RT, 100Khz)	26
Bending Strength	(MPa)	1200
Young's Modulus	(GPa)	220
Hardness	(GPa)	13.5
Fracture Toughness	(MPa-m ^{1/2})	13
Compressive Strength	(MPa)	2400
Maximum use temperature	(C)	1000