TECHNICAL DATA SHEET

ESD Ceramic type (ZJ)

General notes:

- Zirconia Toughened Alumina (ZTA)
- a superior combination of high strength (from zirconia) and high hardness (from alumina)
- relatively low density
- no open porosity
- very hard surface, good abrasion and wear resistance
- good flexural strength and fracture toughness
- excellent thermal properties and high temperature stability
- extreme corrosion resistance, nearly chemically inert
- **ESD Safe static dissipative material**
- typically applications includes **handling of EOS/ESD** sensitive components, handling of components during thermal, chemical and soldering processes. Generally used when very rigid tips are required.

Mechanical properties

Flexural modulus	**200 GPa**
Flexural strength (25°)	**500 MPa**
Hardness Vickers	**1700 HV**

Thermal properties

Thermal conductivity	**5 W/m K**	
Coef. of lin. therm expansion	**$9.5*10^{-6}$/°K**	*25°C-1.000°C*
Max Temperature	**1200°C**	
Shock resistance, ΔT	**325°C**	

Electrical properties

Surface resistivity	**10^{7}-10^{9} Ohm/sq.**	*100 V*
Decay time	**<0.5 sec**	*1.000-10V*

Other properties

Density	**4.70 g/cm^3**
Open porosity	**0.0%**
Water absorption	**0.0%**
Color	**black**