

# Yttrium Oxide

## Property Comparison\*

<i>Property</i>	<i>Ceralloy® 398J</i>	<i>Ceralloy® 398F</i>
<i>Process</i>	Hot Press	Hot Press
<i>Purity</i>	99.9%	99.9%
<i>Density (g/cc)</i>	5.0	5.02
<i>Mechanical</i>		
Flexural Strength (MPa) @ RT	99	90
Elastic Modulus (GPa)	170	170
Poisson's Ratio	0.31	0.31
Hardness HV(0.3) (Kg/mm <sup>2</sup> )	585	590
Fracture Toughness (MPa•m <sup>1/2</sup> )	1.4	1.4
<i>Thermal</i>		
Thermal Expansion Coeff. 10 <sup>-6</sup> /°C; (RT – 1000 °C)	9.1	9.1
Thermal Conductivity (W/mK) @ 25 °C	14	14
<i>Electrical</i>		
Electrical Resistivity (ohm-cm)	10 <sup>14</sup>	10 <sup>14</sup>
<i>Applications</i>	Semiconductor Components	Focus Rings RF Windows Linders
<i>Key Features</i>	Plasma Wear Resistance	Plasma Wear Resistance

\* Property values are typical and should not be considered specifications.

