



APEX™ Glass

Technical Data Sheet

August 18, 2011

Metric	APEX™ Glass
Thermal expansion (glass)	10 ppm/K
Thermal expansion (ceramic)	9 ppm/K
Thermal conductivity (glass state)	1.5W/mK
Thermal conductivity (ceramic state)	2.8W/mK
Dielectric constant	5.7
Electrical resistivity (glass state)	10 ¹² ohm-cm
Electrical resistivity (ceramic state)	10 ¹⁶ ohm-cm
Tg (glass transition)	452 C
Ts (glass softening point)	477 C
Young's Modulus	~78 GPa
Minimum through-hole size	10 microns
Material thickness	100 microns
Transparency	>90% 370-2300nm
Transformation Temperature (glass-ceramic)	565 C
Annealing Temperature	440 C
Halogen Free?	Yes
Refractive Index	~1.51 @ 546nm, 25 C