

## TECHNICAL INFORMATION

### Thin Film Quartz Glass

Characteristics	Unit	Value
Dielectric Constant @ 10GHz, 23°C	-	3.77
Dielectric Loss Index @ 10 GHz, 23°C	-	$< 1 \times 10^{-3}$
Electrical Resistivity @ 23°C	Ohmcm	$1 \times 10^{18}$
Dielectric Strength @ 23°C	KV/cm	250-400
Density	g/cm <sup>3</sup>	2.2
Knoop-Hardness	N/mm <sup>2</sup>	8500-9500
Mohs-Hardness	-	5-6
Young's Modulus	kN/mm <sup>2</sup>	72
Torsion Modulus	kN/mm <sup>2</sup>	31
Poisson's Ratio	-	0.17
Coefficient of Linear Thermal Expansion @ 23-100°C	$10^{-6}/K$	0.54
Thermal Conductivity @ 23°C	W/mK	1.46
Specific Heat Capacity @ 23-100°C	J/gK	0.67
Refractive Indices @ 23°C, 480nm	-	1.46
Thickness Possibilities	mm	$\geq 0.178$