







Properties	Conditions	Typical Value	Unit	Test Method
<b>Electrical Properties</b>				
Dielectric Constant	@ 10 GHz	*2.80, **2.85		IPC-650 2.5.5.5.1 (Modified)
Dissipation Factor	@ 10 GHz	0.0014, 0.0015		IPC-650 2.5.5.5.1 (Modified)
Surface Resistivity		1.67 x 10 <sup>6</sup>	Mohms (Mohms/cm)	IPC-650 2.5.17.1A (Elevated Temp.)
		2.29 x 10 <sup>4</sup>	Mohms (Mohms/cm)	IPC-650 2.5.17.1A (Humidity)
Volume Resistivity		3.58 x 10 <sup>7</sup>	Mohms (Mohms/cm)	IPC-650 2.5.17.1 Sec. 5.2.1 (Elevated Temp.)
		3.94 x 10 <sup>10</sup>	Mohms (Mohms/cm)	IPC-650 2.5.17.1 Sec. 5.2.1 (Humidity Cond.)
Dimensional Stability	MD	0.45	mm/M (mils/in)	IPC-650 2.4.39A (After Etch)
	CD	0.44	mm/M (mils/in)	
	MD	0.42	mm/M (mils/in)	IPC-650 2.4.39A (Thermal Stress)
	CD	0.33	mm/M (mils/in)	
<b>Thermal Properties</b>				
Thermal Conductivity		0.49	W/M*K	ASTM E1530-11
		0.53	W/M*K	ASTM E1461
CTE (45 - 125 °C)	X	19	ppm/°C	IPC-650 2.4.41/ASTM D3386
	Y	25		
	Z	49		
<b>Mechanical Properties</b>				
Peel Strength	0.5 oz. ULP	1.05 (6)	N/mm (lbs/in)	IPC-650 2.4.8, sec. 5.2.2
	1 oz. ULP - MD	1.05 (6)	N/mm (lbs/in)	
	1 oz. ULP - CD	1.05 (6)	N/mm (lbs/in)	
	1 oz. ULP - MD	1.05 (6)	N/mm (lbs/in)	IPC-650 2.4.8, sec. 5.2.2 (Thermal Stress)
	1 oz. ULP - CD	1.05 (6)	N/mm (lbs/in)	
	1 oz. ULP - MD	1.05 (6)	N/mm (lbs/in)	IPC-650 2.4.8, sec. 5.2.2 (Chemical Exp.)
1 oz. ULP - CD	1.05 (6)	N/mm (lbs/in)		
Compressive Modulus		3,496 (507,000)	N/mm <sup>2</sup> (psi)	ASTM D695-15
<b>Chemical / Physical Properties</b>				
Density	Specific Gravity	2.12	g/cm <sup>3</sup>	STM D792 -13 (Method A)
Dielectric Breakdown		39.8	kV	IPC-650 2.5.6/ASTM 229-13
		23.8	kV	IPC-650 2.5.6.2/ASTM D149-09
Arc Resistance		248	Seconds	ASTM D495-14

\*2.80 uses low DK spread weave glass; \*\*2.85 uses regular DK spread weave glass.

- \* All test data provided are typical values and not intended to be specification values. For review of critical specification tolerances, please contact a company representative directly.
- \* EZ-IO-F can be manufactured in increments of 0.005"(0.125mm).
- \* Standard panel size is 18" x 24" (457 mm x 610 mm).
- \* Please contact AGC for availability of additional thicknesses, other sizes & any other type of cladding.

