



# IT-180I

## High Tg/ Low CTE / Standard Loss Laminate & Prepreg

- Excellent CAF resistance
- Low CTE & Standard Loss performance
- Lead Free , High Tg and high thermal reliability
- For high layer count PCB applications

### Laminate properties

Items	IPC TM-650	Typical Value	Unit
Peel Strength, minimum A. Low profile copper foil B. Standard profile copper foil	2.4.8	5 8	lb/inch
Volume Resistivity	2.5.17.1	1x10 <sup>10</sup>	MΩ-cm
Surface Resistivity	2.5.17.1	1x10 <sup>10</sup>	MΩ
Moisture Absorption, maximum	2.6.2.1	0.12	%
Permittivity (Dk, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	2.5.5.13	4.3 4.1 4.0 4.0	--
Loss Tangent (Df, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	2.5.5.13	0.013 0.013 0.014 0.015	--
Flexural Strength, minimum A. Length direction B. Cross direction	2.4.4	470-500 420-450	N/mm <sup>2</sup>
Thermal Stress 10 s at 288°C A. Unetched B. Etched	2.4.13.1	Pass Pass	Rating
Flammability	UL94	V-0	Rating
Glass Transition Temperature(DSC)	2.4.25	175	°C
Decomposition Temperature	2.4.24.6	350	°C
X/Y Axis CTE (40°C to 125°C)	2.4.24	10-13	ppm/°C



Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	2.4.24	40 210 2.3	ppm/°C ppm/°C %
Thermal Resistance A. T260 B. T288	2.4.24.1	>60 >30	Minutes Minutes