

ITEQ
Your Partner of Advanced Materials
& Mass Lam Service

IT-150GS

CCL : IT-150GSTC
Prepreg: IT-150GSBS

Middle Tg / Halogen Free / Mid-Loss Laminate & Prepreg

- ANSI Type : **FR-4.1**
- Applicable IPC-4101/ 127/128；IPC-4103/ 250/550
- Halogen free, Middle-Tg (155ºC) / Compatible with FR-4 processes
- High thermal & CAF resistance reliability / Environmental friendly materials

Laminate proprties

Items	IPC TM-650	Typical Value	Unit
Peel Strength A. Low profile copper foil	2.4.8	5.0	lb/inch
Volume Resistivity	2.5.17.1	10^{10}	MΩ-cm
Surface Resistivity	2.5.17.1	10^{10}	MΩ
Moisture Absorption	2.6.2.1	0.12	%
Permittivity (Dk, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	 2.5.5.9 2.5.5.13 2.5.5.13 2.5.5.13	 4.2 4.1 4.0 3.9	--
Loss Tangent (Df, 50% resin content) A. 1GHz B. 2GHz C. 5GHz D. 10GHz	 2.5.5.9 2.5.5.13 2.5.5.13 2.5.5.13	 0.010 0.010 0.011 0.012	--
Flexural Strength A. Length direction B. Cross direction	2.4.4	 470-500 400-430	N/mm²
Young's Modulus A. Warp direction B. Fill direction	ASTM D3039	 15 14	Gpa
Thermal Stress 10 s at 288˚C A. Unetched B. Etched	2.4.13.1	 Pass Pass	Rating
Flammability	UL94	V-0	Rating
Comparative Tracking Index (CTI)	ASTM D3638 / UL 746	CTI 3 (175-249)	Class (Volts)
Maximum Operating Temperature(MOT)	UL 746	130	˚C
Glass Transition Temperature(DSC) Glass Transition Temperature(TMA)	2.4.25 2.4.24	155 150	˚C
Decomposition Temperature(5% W.L)	2.4.24.6	365	˚C
X/Y Axis CTE (40℃ to 125℃)	2.4.41	11/13	ppm/˚C
	2.4.24.5	10/11	ppm/˚C
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	2.4.24	 35 230 3.1	 ppm/˚C ppm/˚C %
Thermal Resistance A. T260 B. T288	2.4.24.1	 >60 >60	 Minutes Minutes