

ITEQ
Your Partner of Advanced Materials & Mass Lam Service

IT-170GLE

CCL : IT-170GLETC
Prepreg: IT-170GLEBS

High Tg, Halogen Free & Low Dk, Multifunctional Epoxy Laminate & Prepreg

- ANSI Type : **FR-4.1**
- Applicable IPC-4101 /127/128/130；IPC-4103 /240/540
- Low Df, High Tg and high thermal reliability / Friendly Processing and CAF Resistance
- High Storage modules / For HDI process applications

Laminate properti es

Items	IPC TM-650	Typical Value	Unit
Peel Strength, minimum A. Low profile copper foil B. Standard profile copper foil	2.4.8	 4-5 6-7	lb/inch
Volume Resistivity	2.5.17.1	$1x10^{10}$	MΩ-cm
Surface Resistivity	2.5.17.1	$1x10^{10}$	MΩ
Moisture Absorption, maximum	2.6.2.1	0.12	%
Permittivity (Dk, 75% 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	 3.33 3.30 3.24 3.14	--
Loss Tangent (Df, 75% 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	 0.0095 0.0098 0.0104 0.0108	--
Flexural Strength, minimum A. Length direction B. Cross direction	2.4.4	 550-590 500-540	N/mm^2
Thermal Stress 10 s at 288℃ 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 2(250-399)	Class (Volts)
Maximum Operating Temperature(MOT)	UL 746	130	℃
Glass Transition Temperature(DSC)	2.4.25	170	℃
Decomposition Temperature(5% W.L)	2.4.24.6	380	℃
X/Y Axis CTE (40℃ to 125℃)	2.4.41	11-13	ppm/℃
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	2.4.24	 40 225 2.3	 ppm/℃ ppm/℃ %
Thermal Resistance A. T260 B. T288	2.4.24.1	 >60 >60	Minutes