



## PRODUCTS

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## IT-140BS/IT-140TC

### Medium Tg Tetra-Functional Epoxy Resin and Dicy-Cured Laminate & Prepreg

*IT-140 is a medium Tg (>135 °C by DSC) trtra-functional epoxy with AOI and UV blocking resin system. Dicy cured and 94 V-0. Suitable for consumer application.*

### Key Features =====

#### Resin Technology

*Industrial standard material with medium Tg (135 °C by DSC) tetra-functional epoxy resin and dicy cured.*

#### Good Thermal Reliability

*RoHS compliant and suitable for thermal reliability needs. High peel strength value and better reliability compared with the similar resin system of competitor's.*

#### Friendly Processing and CAF Resistance

*Friendly to PCB process that users can easily handle the process by current equipment and chemical.*

#### AOI and UV Blocking

*It's good for AOI and UV blocking of PCB imaging inspection process.*

#### Available in Variety of Constructions

*Available in a various of constructions, copper weights and glass styles, including standard(HTE), RTF and VLP copper foil.*

### Applications

**PC and Notebook**

**Memory Module**

**Game Player**

**Consumer and Multilayer PCB**

### Industrial Approval

**UL 94 V-0**

**IPC-4101C Spec / 21**

**RoHS Compliant**

## IPC-4101A Spec / 21

## LAMINATE(IT-140TC)

Property	Thickness<0.50 mm [0.0197 in]		Thickness≥0.50 mm [0.0197 in]		Units	Test Method
	Typical Value	Spec	Typical Value	Spec	Metric (English)	IPC-TM-650 (or as noted)
Peel Strength, minimum A. Low profile copper foil and very low profile copper foil - all copper weights > 17μm [0.669 mil] B. Standard profile copper foil 1. After Thermal Stress 2. At 125°C [257 F] 3. After Process Solutions	0.96 (5.5)	0.70 (4.0)	0.96 (5.5)	0.70 (4.0)	N/mm (lb/inch)	2.4.8 2.4.8.2 2.4.8.3
Volume Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	5x10 <sup>10</sup> -- 5x10 <sup>10</sup>	10 <sup>6</sup> -- 10 <sup>3</sup>	-- 5x10 <sup>10</sup> 5x10 <sup>10</sup>	-- 10 <sup>4</sup> 10 <sup>3</sup>	MΩ-cm	2.5.17.1
Surface Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	3.5x10 <sup>10</sup> -- 6x10 <sup>10</sup>	10 <sup>4</sup> -- 10 <sup>3</sup>	-- 3.5x10 <sup>10</sup> 6x10 <sup>10</sup>	-- 10 <sup>4</sup> 10 <sup>3</sup>	MΩ	2.5.17.1
Moisture Absorption, maximum	0.30	--	0.1	0.8	%	2.6.2.1
Dielectric Breakdown, minimum	--	--	60	40	kV	2.5.6
Permittivity (Dk, 50% resin content) (Laminate & Laminated Prepreg) A. 1MHz	4.6	5.4	4.6	5.4	--	2.5.5.9
Loss Tangent (Df, 50% resin content) (Laminate & Laminated Prepreg) A. 1MHz	0.016	0.035	0.016	0.035	--	2.5.5.9
Flexural Strength, minimum A. Length direction B. Cross direction	-- -- --	-- -- --	500-530 (72,500-76,850) 430-460 (62,350-66,700)	415 (60,190) 345 (50,140)	N/mm <sup>2</sup> (lb/in <sup>2</sup> )	2.4.4
Arc Resistance, minimum	120	60	120	60	s	2.5.1
Thermal Stress 10 s at 288°C [550.4F], minimum A. Unetched B. Etched	Pass Pass	Pass Visual Pass Visual	Pass Pass	Pass Visual Pass Visual	Rating	2.4.13.1
Electric Strength, minimum (Laminate & Laminated Prepreg)	45	30	--	--	kV/mm	2.5.6.2
Flammability, (Laminate & Laminated Prepreg)	V-0	V-0	V-0	V-0	Rating	UL94
Glass Transition Temperature(DSC)	140	135 minimum	140	135 minimum	°C	2.4.25
Decomposition Temperature	--	--	305	--	°C	2.4.24.6 (5% wt loss)
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	-- -- --	-- -- --	55 290 4.2	-- -- --	ppm/°C ppm/°C %	2.4.24
Thermal Resistance A. T260 B. T288	-- --	-- --	15 2	-- --	Minutes Minutes	2.4.24.1
CAF Resistance	--	--	Pass	AABUS	Pass/Fail	2.6.25

The above data and fabrication guide provide designers and PCB shop for their reference. We believe that these information are accurate, however, the data may vary depend on the test methods and specification used. The actual sales of the product should be according to specification in the agreement between ITEQ and its customer. ITEQ reserves the right to revise its data at any time without notice and maintain the best information available to users.