



IT-859GTA (V2)

Metal Base Laminate & Prepreg with Halogen Free Multifunctional Filled and Reinforced Epoxy

IT-859GTA is a Tg of 100 °C (by DSC) halogen free multifunctional filled epoxy with metal base and glass fabric reinforced laminate. It has good thermal conductivity of 3W/mK. It also provide high thermal reliability and can pass 260 °C Lead free assembly.

Key Features

Advanced Resin Technology

Industrial standard material with Tg of 100 °C (by DSC) halogen free multifunctional filled epoxy resin and excellent thermal reliability.

Heat Management Technology

Excellent thermal conductivity of 2W/mK (based on Laird 1KA04 as reference).

Thermal impedance measurement is follow industrial ASTM D5470 standard and referenced to Laird 1KA04.

Lead-Free Assembly Compatible

RoHS compliant and suitable for high thermal reliability needs, and allow Lead free assemblies with a maximum reflow temperature of 260 °C.

Standard Availability

- **Standard panel size:**
 - 19.7" x 23.6" (500mm x 600mm)
 - 19.7" x 47.2" (500mm x 1200mm)
 - 18" x 24" (457mm x 610mm)
- **Standard copper weight:**
 - 0.5oz; 1oz; 2oz; 3oz; 4oz;
- **Standard dielectric thickness:**
 - 3mil (0.075mm); 4mil (0.1mm); 6mil (0.15mm)
- **Standard Aluminum:**
 - 1050 (H type & H24 type)
 - 5052 (H type & H34 type)
 - 6061 (H type & T6 type)
 - Aluminum thickness : 0.8mm; 1.0mm; 1.5mm; 1.6mm; 2.0mm

Applications

Notebook Light Bar

LED Lighting Applications

LCD TV Light Bars

Automobile Lighting

Traffic Lighting

Street Lamp and Lighting

Industrial Approval

UL 94 V-0

RoHS Compliant



IT-859GTA (V2) Dielectric Properties

PROPERTIES	TYPICAL VALUES	TEST METHOD
THERMAL PROPERTIES		
Thermal Conductivity	2 W/m-K	ASTM D5470
Thermal Resistance	0.2 °C-in ² /W	ASTM D5470
Glass Transition Temperature	105°C	ASTM E1356
Max Operating Temperature	110°C	U.L. 796
ELECTRICAL PROPERTIES		
Permittivity (1MHz)	4.8	IPC-TM-650 2.5.5.9
Loss Tangent (1MHz)	0.018	IPC-TM-650 2.5.5.9
Volume Resistivity	>10 ¹⁰ MΩ-cm	ASTM D257
Surface Resistivity	>10 ¹⁰ MΩ	ASTM D257
Dielectric Strength	1000V/mil	ASTM D149
Breakdown Voltage	4KV/AC	ASTM D149
MECHANICAL PROPERTIES		
Peel Strength @ 25°C	6 lb/inch (1.1N/mm)	ASTM D2861
CTE in Z Axis < Tg	40µm/m°C	ASTM D3386
CTE in Z Axis > Tg	250µm/m°C	ASTM D3386
Storage Modulus	480/450 N/mm ² (@ 25°C/150°C)	ASTM 4065
Water Vapor Retention	0.1%	ASTM E595
AGENCY RATINGS & DURABILITY		
U.L. Continuous Operating Temperature	110°C	U.L. 746B
U.L. Flammability	V-0	U.L. 94
Comparative Tracking Index (CTI)	0	ASTM D 3638
Solder Float	Pass	IPC-TM-650 2.4.13

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.