Taiwan Union Technology Corporation
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Lead free compatible

Hi-Tg high thermal reliability for Lead free compatible laminate and prepreg

TU-768, TU-768P

TU-768/ TU-768P laminate/ prepreg are made of high quality woven E-glass coated with the epoxy resin system, which provides the laminates with UV-block characteristic, and compatibility with automated optical inspection (AOI) process. These products are suitable for boards that need to survive severe thermal cycles, or to experience excessive assembly work. TU-768 laminates exhibit excellent CTE, superior chemical resistance and thermal stability plus CAF resistance property.

PERFORMANCE AND PROCESSING ADVANTAGES

- Lead Free compatible
- Excellent coefficient of thermal expansion
- Anti-CAF property
- Superior chemical and thermal resistance
- Fluorescence for AOI
- Moisture resistance

GENERAL INFORMATION

- Industry Approvals

UL Designation - ANSI Grade	FR-4
UL File Number	E189572
Flammability Rating	94V-0
Maximum Operating Temperature	130°C

- Standard Availability

Thickness: 0.002"[0.05mm] to 0.062"[1.58mm], available in sheet or panel form
Copper Foil Cladding: 1/8 to 12oz (HTE) for built-up; 1/8 to 3oz (HTE) for double sides and H to 2oz (MLS)
Prepregs: Available in roll or panel form
Glass Styles: 106, 1080, 2113, 2116, 1506 and 7628, etc.

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TYPICAL PROPERTIES FOR TU-768 LAMINATES

PROPERTY	IPC-4101	SPEC	TYPICAL VALUES
Thermal			
Tg (DMA)	E-2/105+des	N/A	190 ℃
Tg (DSC)			180 ℃
Tg (TMA)			170 ℃
Td (TGA)			350 ℃
CTE x-axis	Ambient to Tg	-	11~15 ppm/℃
CTE y-axis	Ambient to Tg	-	11~15 ppm/℃
CTE z-axis	25 to 260℃	-	2.7 %
Thermal Stress, Solder Float , 288℃	A	> 10	> 60 sec
T-260	E-2/105+des	N/A	> 60 min
T-288			> 15 min
Flammability	E-24/125+des	94V-0	94V-0
Electrical			
Permittivity (RC 50%)			
1GHz (HP 4291B)	C-24/23/50	< 5.4	4.3
5GHz (SPC method)			4.3
10GHz (SPC method)			4.3
Loss Tangent (RC 50%)			
1GHz (HP 4291B)	C-24/23/50	< 0.035	0.019
5GHz (SPC method)			0.021
10GHz (SPC method)			0.023
Volume Resistivity	C-96/35/90	> 10^6	> 10^{10} MΩ·cm
Surface Resistivity	C-96/35/90	> 10^4	> 10^8 MΩ
Electric Strength		>30 kV/mm	> 40 kV/mm
Dielectric Breakdown Voltage		>40 kV	> 50 kV
Mechanical			
Young's Modulus			
Warp Direction	-	G Pa	25
Fill Direction			22
Flexural Strength			
Lengthwise	A	> 60,000	> 65,000 psi
Crosswise	A	> 50,000	> 55,000 psi
Peel Strength 1.0 oz. Cu foil	A	> 6	7~9 lb/inch
Water Absorption	E-1/105+des+D-24/23	< 0.8	0.18 %

NOTE:
1. Property values are for information purposes only and are not guaranteed.
2. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.