

MICAM's UL recognised flame retardant FR4 epoxy-glass copperclad laminate offering excellent mechanical and electrical performance

Characteristics	UL listed, Flame Retardant, Excellent electrical and mechanical properties
Colours	Translucent green and black.
Thickness	0.64 mm to 3.2 mm
Copper	18 $\mu\text{m}$ or 35 $\mu\text{m}$ (other copper thickness available)
Sheet Size	1220 mm x 1060 mm (panel sizes cut on request)

	units	test method
<b>GENERAL PROPERTIES</b>		
Relative Density	1.9 g/cm <sup>3</sup>	
Temperature Rating	130 (Class B) °C	
Flammability	V-0 -	UL-94
Water Absorption	0.2 % (1.6 mm)	IPC-TM-650 2.6.2.1
Glass Transition Temperature	125 °C	IPC-TM-650 2.4.25
<b>MECHANICAL PROPERTIES</b>		
Flexural Strength Lengthwise	470 MPa (1.6 mm)	IPC-TM-650 2.4.4
Copper Peel Strength	1.8 N/mm (18 $\mu\text{m}$ )	IPC-TM-650 2.4.8
Solder dip at 260°C	> 30 s	
<b>ELECTRICAL PROPERTIES</b>		
Volume Resistivity C-96/35/90	10 <sup>6</sup> M $\Omega$ cm (0.5 mm)	IPC-TM-650 2.5.17.1
Surface Restivity C-96/35/90	2 x 10 <sup>6</sup> M $\Omega$ (0.5 mm)	IPC-TM-650 2.5.17.1
Dielectric Breakdown	> 50 kV (1.6 mm)	IPC-TM-650 2.5.6
Dissipation Factor at 1 MHz	0.008 -	IPC-TM-650 2.5.5.3
Permittivity at 1 MHz	4.2 -	IPC-TM-650 2.5.5.3
Comparative Tracking Index	> 175 V	IEC 112/DIN 53480 Kc

## CONDITIONING

C-96/35/90 – 90% Relative Humidity @ 35°C for 90 hours

## SPECIFICATION COMPLIANCE

IPC 4101/21; NEMAL1-1 FR-4

## ENVIRONMENTAL COMPLIANCE

RoHS compliant; REACH compliant

## QUALITY SYSTEM APPROVAL

Certified by NSAI to I.S. ENISO 9001:2015 Reg. No. IE-19.0675.

## PRODUCT APPROVAL

Recognised by Underwriters Laboratories file ref. E53727

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