

MICAM's FR-4 flame retardant epoxy-glass copper clad laminate offering excellent mechanical and electrical performance

Characteristics	Flame Retardant, Excellent electrical, mechanical properties
Colours	Translucent green and black. Other colours available on request
Thickness	0.2mm to 3.2mm
Copper	18µm or 35 micronµm (other copper thickness available)
Sheet Size	1220mm x 1060mm (panel sizes cut on request)

	units	test method
GENERAL PROPERTIES		
Relative Density	1.9 g/cm ³	
Temperature Rating	130 (Class B) °C	
Flammability	V-0 -	UL-94 *
Water Absorption	0.2 % (1.6mm)	IPC-TM-650 2.6.2.1
Glass Transition Temperature	125 °C	IPC-TM-650 2.4.25

* will meet the requirements of the V-0 on UL-94 vertical flame test, however the product is not UL listed.

MECHANICAL PROPERTIES		
Flexural Strength Lengthwise	470 MPa (1.6mm)	IPC-TM-650 2.4.4
Copper Peel Strength	1.8 N/mm (18µm)	IPC-TM-650 2.4.8
Solder dip at 260°C	> 30 s	

ELECTRICAL PROPERTIES		
Volume Resistivity C-96/35/90	10 ⁶ MΩcm (0.5mm)	IPC-TM-650 2.5.17.1
Surface Restivity C-96/35/90	2 x 10 ⁶ MΩ (0.5mm)	IPC-TM-650 2.5.17.1
Dielectric Breakdown	> 50 kV (1.6mm)	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; NEMA LI-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.

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