

## Industry Leading Metal cored pcbs

UniLam3000 is a high thermal performance Insulated metal printed circuit board laminate for use in a wide variety of applications including high power LED arrays, motor control, automotive and power conversion

### Typical applications include:

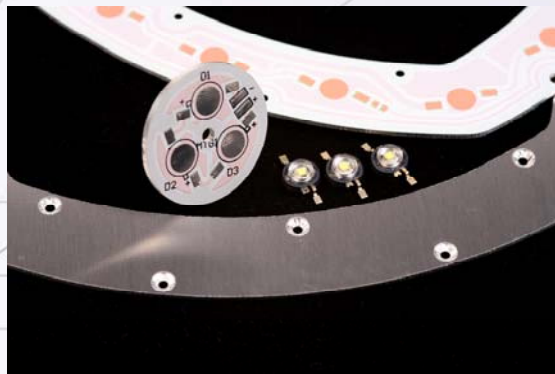
- Cooling surface mount power devices
- LED light engines, Power supplies and drivers
- Motor Drive applications
- AC-DC & DC-DC power converters
- Automotive applications



## Technical Specification

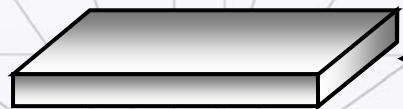
UniLam3000 is a high performance, low cost thermal management printed circuit material designed to dissipate unwanted heat from surface mounted electronic components.

With a thermal conductivity of 3.0W/mK UniLam3000 provides extremely effective cooling and heat spreading. UniLam3000 is designed to be processed using regular pcb processing techniques and typically automated assembly methods are used reducing the overall cost of the assembly still further.



# Technical Specification

Electrical Properties	UniLam3000 (100)	UniLam3000 (150)	UniLam3000 (200)	Units
Max. Operating Voltages				
Continuous AC	80	120	220	VAC
Continuous DC	100	250	450	VDC
Volume Resistivity @ 25°C	≥1.0E+14	≥1.0E+14	≥1.0E+14	Ω-cm
Dielectric Strength (ASTM D149)	300	300	300	V/0.1mm
Hi-pot Test Voltage	1500	2700	3500	VDC
Flammability	UL94 V-0	UL94 V-0	UL94 V-0	
Thermal Properties	UniLam3000 (100)	UniLam3000 (150)	UniLam3000 (200)	Units
Thermal Conductivity	3.1	3.1	3.1	W/mK
Thermal Resistance per 25 mm sq	0.05	0.08	0.1	K/W
Glass Transition Temperature	110	110	110	°C
Maximum Operating Temperature	110	120	130	°C
Operating Temperature Excursion	-50 / +150	-50 / +150	-50 / +150	°C
Maximum Soldering Temperature	300	300	300	°C
Mechanical Properties	UniLam3000 (100)	UniLam3000 (150)	UniLam3000 (200)	Units
Dielectric Thickness	100 Micron	150 Micron	200 Micron	Millimetres
Peel Strength	4.2	4.7	5.1	N/mm
Thermal Stress Test	No de-lam	No de-lam	No de-lam	Micron/m °C Std Test



<b>Active Copper layer choices</b> 35 Microns to 0.420mm (35 Micron increments)
<b>Thermal interfacing Dielectric choices</b> 100 Microns to 250 Microns (50 Micron increments)
<b>Base plate</b> Aluminium 1.0, 1.6, 2.0, 3.0mm Copper 0.9, 1.0, 1.2mm

- Uses standard low cost PCB fabrication techniques.
- Can be punched, routed, drilled, or scored to create single parts from an array.
- Mechanically rugged under vibration and mechanical shock.
- Aluminium base metal can be finished with Alocrome or Anodised with different colours.
- Top copper foils available in thicknesses of 35 Microns to 420 Micron (0.5 Oz to 12 Oz)
- Solder re-flow characteristics are exceptional due to heat spreading.
- Any finish can be applied to the active Copper HASL, Immersion Silver, Organic, Ag / Nickel.
- Designed to accept Naked Chip and wire bonding technology.
- Opportunities to integrate power and control circuitry in one circuit.
- Multi-layer constructions are possible for higher track density applications.
- Large PCB formats possible including integral fixing holes, threaded holes and fasteners.

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