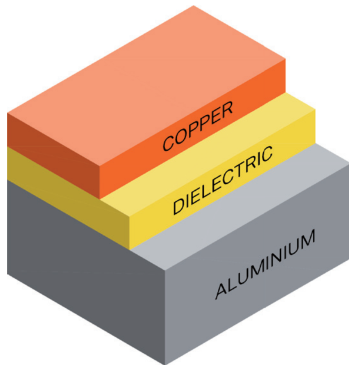
COBRITHERM ALCUP G-NT 1,3W 100µm

STANDARD CONSTRUCTION



*Other constructions available upon request

ED copper thickness µm (in)
35 (1oz) / 70 (2oz)

Isolation thickness µm (in)
100 (4 mils)

Dielectric thickness tolerance
+/- 10µm (+/- 0,4 mils)

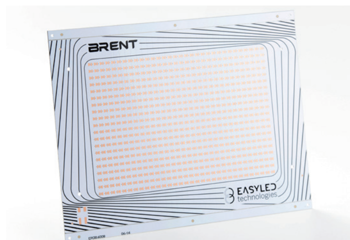
Aluminium thickness µm (in)
1000 (0,0394)
1500 (0,059)

Alloy/Treat
5052

DESCRIPTION

Insulated Metal Substrate (IMS), based aluminum clad with ED copper foil on the opposite side. It is designed for the reliable thermal dissipation of circuitry. A proprietarily formulated reinforced-polymer-ceramic bonding layer with a high thermal conductivity and dielectric strength allows us to guarantee thermal endurance.
The substrate ALCUP G NT is a laminate manufactured in large productions and ideal for large volume with reduced costs.

(1) Electrical proof test. Sampling verification at 1000V DC



Source: Product by Sacopa Ignialight

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UL Approved QMTS2 QMTS8 File: E47820 IPC-4101

RoHS 3 / REACH
Last updated compliance directive

PROPERTIES*	TEST METHOD	UNITS	TYPICAL VALUES	GUARANTEED VALUES
Time to blister at 288°C, floating solder bath	IEC-61189	Sec	>120	≥60
Copper Peel strength, after heat shock 20 sec/288°C (Cu 70 µm)	IPC-TM 650-2.4.8	N/mm (Lb/in)	2,3 (13,1)	≥1,8 (≥10,3)
Dielectric breakdown voltage, AC (2)	IPC-TM 650-2.5.6.3	kV	5	4,5
Proof Test, DC (1)	--	V	1000	1000
Thermal conductivity (dielectric layer)	ASTM-D 5470	W/mK (W/inK)	1,30 (0,032)**	1,30 (0,032)**
Thermal conductivity (Copper+dielectric+aluminium) (3)	ASTM-D 5470	W/mK (W/inK)	18,9**	18,9**
Thermal conductivity (dielectric layer)	ASA-7540	W/mK (W/inK)	2.0 (0.049)**	2.0 (0.049)**
Thermal impedance (dielectric layer)	ASTM-D 5470	Kcm²/W (Kin²/W)	0,77 (0,12)**	0,77 (0,12)**
Surface resistance after damp heat and recovery	IEC-61189	MΩ	10^5	10^5
Volume resistivity after damp heat and recovery	IEC-61189	MΩm	10^4	10^4
Relative permittivity after damp heat and recovery, 10 kHz	IEC-61189	-	4,5	4,5
Dissipation factor after damp heat and recovery 10 kHz	IEC-61189	-	0,02	0,02
Comparative tracking index (CTI)	IEC-61112	V	600	>550
Permittivity	--	pF/m (pF/in)	6,7 (39,4)	6,7 (39,4)
Flammability, according UL-94, class	UL-94	Class	V-0	V-0
Glass transition temperature of dielectric layer (by TMA)	IPC-TM 650-2.4.24	°C	120	120
Maximum operating temperature	--	°C	130	130

(*) Values or parameters measured with a destructive method or limited size for the test sample must be considered as a representative values, and not as guaranteed values. They are not guarented over 100% of the material.
(**)Thermal conductivity and impedance values may have a +/- 15% deviation.
(2) Dielectric Breakdown test, it is a material destructive laboratory test. It is performed according the IPC-TM-650 part 2.5.6.3., by raising AC voltage until electric failure on a relatively small surface area of the dielectric layer using metal electrodes. Values should be taken as a material reference, and not as guaranteed values.
(3) Thermal conductivity of the full stack of IMS: copper 70mic + dielectric 100 micron (4 mils) + Aluminium 1,5mm (0,059”)

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AVAILABILITY	
STANDARD SHEET SIZES mm. (in	1235x1035 (48'6x40'7), 1250x950 (49'2x37'4), 1290x1045 (50'7x41'14). (Also available in cut to size panels)
Tolerance	+5⁄-0 mm (0,2 in)
Squareness	3 mm (0,12 in) max., as differential between diagonal measurements.
Standard size tolerance in panels	+- 0,3 mm. (0,0118 in)

The data is based on typical values of standard production and should be considered as general information. Our company reserves the right to future changes. It is the responsibility of the user to ensure that the product complies with his requirements.

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