

CS-AL-88/89 AD3 (3 W/m°C)

Specification of Aluminum Based Copper-Clad Laminate

Item	Unit		Specification	Test condition
Insulation thickness	µm	Max	200	—
		Min	60	
Solder resistance (288°C)	Sec.	Min	600	IPC-TM-650 3.10.1.12
Thermal shock	288°C*10 ³ /cycle	Min	6 Times	IPC-TM-650 2.4.13.1
Peel strength (Normal status)	lb/in	Min	9	IPC-TM-650 2.4.8
Breakdown Voltage	V/mil		750	IPC-TM-650 2.5.6
Volume resistivity (Normal status >E+14)	Ω·cm		1.8x10 ¹⁶	IPC-TM-650 2.5.17.1
Surface resistivity (Normal status >E+12)	Ω	—	3.5x10 ¹⁵	IPC-TM-650 2.5.17.1
Dielectric constant				IPC-TM-650
1 MHz Normal status	—		6.1	2.5.5.3
1 GHz Normal status			6.0	2.5.5.5
				2.5.5.6
Dissipation Factor				IPC-TM-650
1 MHz Normal status			0.017	2.5.5.3
1 GHz Normal status			0.009	2.5.5.5
				2.5.5.9
Water absorption	%		0.2	IPC-TM-650 2.6.2.1
Thermal conductivity (measured on insulation layer only)	W/m°C		3.0	ASTM-E1461
Flammability	94V-0		Pass	IPC-TM-650 2.3.9
Tg	°C		100	IPC-TM-650 2.4.24
Td	°C		420	TBD (5wt% loss)
MOT (RTI)	°C		130	UL 746B
CTI (Comparative Tracking Index)	V		>600 (PLC=0)	UL746E DSR

The thickness and dimension of Aluminum Based Copper-Clad Laminate

Product category	CS-AL-88/89 AD3 (The thickness of resin is 2~8mil)				
Dimension m/m	300~340×500~520 405/400×500~520 600~620×500~520 1200~1240×500~520 1200~1240×1020~1060				
The thickness of Single-Sided PCB with Aluminum Substrate	2.0 1/0	1.5 1/0	1.5 2/0	1.0 1/0	0.8 1/0
The thickness of Double-Sided PCB with Aluminum Substrate	2.0 1/1	1.5 H/H	1.5 1/1	1.0 1/1	0.8 1/1

» The above thicknesses exclude the thickness of resin, and the thicknesses of copper and Aluminum can be combined arbitrarily.

The thickness of copper foil : H oz~5.0 oz. The thickness of aluminum plate : 0.2~5.0mm.

- » Halogen free material
- » Compliance with RoHS and REACH.

The scope of application

- » Lighting : General LED lighting.
- » Electronic devices in automobile : Ignition device, voltage regulator, auto safety control system, AC converter.
- » Power supply : Switch regulator, switch, DC-DC converter, DC-AC converter, MEGA power supply, solar power board.
- » Electronic control : Relay, transistor base, switchboard, radiator, insulating conductive board in semiconductor, motor control device.
- » Computer devices : Power supply device, soft disk driver, CPU.
- » Communication : Automobile telephone, high frequency booster mobile telephone, circuit filter, transmitting circuit.

Copper Foil (1/2~3oz)

Dielectric Layer (60~200um)

AL Plate(0.8~2.0mm)



1. We may provide from panel size (510x610mm) to sheet size of 1,100x1,240mm
2. Good features of our MCCL
 - High thermal conductivity (1~12W)
 - High peel strength 9(lb/in)
 - High BDV and Reliability
 - RoHS compliance