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 Min	200 60	—
Solder resistance (288°C)	Sec.	Min	600	IPC-TM-650 3.10.1.12
Thermal shock	288˚C*10"/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 1 MHz Normal status 1 GHz Normal status	—		 6.1 6.0	IPC-TM-650 2.5.5.3 2.5.5.5 2.5.5.6
Dissipation Factor 1 MHz Normal status 1 GHz Normal status			 0.017 0.009	IPC-TM-650 2.5.5.3 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 glue is 2~8mil)				
Dimension m/m	300~340×500~520 400~410×500~520 600~620×500~520 940×1245/1040×1245 1090×1245/1000×1200				
Normal thickness spec of Single-Sided MCCL with Aluminum Substrate	2.0 1/0	1.5 1/0	1.0 1/0	0.8 1/0	0.6 1/0
Normal thickness spec of Double-Sided MCCL 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 excluded the thickness of resin, and the thickness of copper and aluminum can be combined arbitrarily.
» Halogen-free material.
» Compliance with the RoHS and REACH.

The scope of application

» Lighting：LED wall washer lighting, LED stage lighting, LED street lighting, LED indoor lighting, LED office lighting, LED automotive lighting.
» Electronic devices in automobile：Ignition device, voltage regulator, auto safety control system, AC transformer.
» Power supply：Switch regulator, switch, DC-DC transformer, DC-AC transformer, power supply, solar power base 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.
» Commumication：Automobile telephone, high frequency booster mobile telephone, circuit filter, transmitting circuit.