



FR-4 Glass Epoxy Copper Clad Laminate

UL CODE:SN-L4

COLOUR: YELLOW

For single sided ,double sided printed circuit board.

Thickness: $\geq 0.38\text{MM}$	
Copper Clad	:0.5oz (18 micron) 1.0oz (35 micron) 2.0oz (70 micron) 3.0oz (103micron)
Size	:36"x48"(914mmX1220mm) 40"x48"(1016mmX1220mm) 42"x48"(1067mmx1220mm)

NO	Test Item	Treatment condition	Unit	Index
1	Peel Strength			
	A 1/2oz Copper foil	As Received	A	Ib/in ≥ 6.0
		After Thermal Stress	A	Ib/in ≥ 6.0
	B 1oz Copper foil	As Received	A	Ib/in ≥ 8.0
After Thermal Stress		A	Ib/in ≥ 8.0	
2	Surface Resistivity at Elevated Temperature	E-24/125	M Ω	$\geq 10^3$
3	Volume Resistivity at Elevated Temperature	E-24/125	M Ω .CM	$\geq 10^3$
4	Water Asorption	0.10-0.77MM	E-1/105+des +D-24/23	≤ 0.80
		0.78-3.20MM		≤ 0.35
5	Flexural Strength	Lengthwise	A	Mpa ≥ 410
		Crosswise		≤ 340
6	Dielectric Breakdown Parallel To laminate	D-48/50+D-0.5/ 23	KV	≥ 40
7	Dielectric Constant Permittivity at 1MHZ	C-40/23/50		≤ 5.4
8	Bow and Twist	Double Sdes	A	% ≤ 1.0
		Single Side		≤ 1.5
9	Flammability	A&E-1/105+ des		94-V0
10	Thermal stress (288 ⁰ C,20seconds)	Unetched	A	No defect
		After etched		No defect
11	Pressure Vessel Thermal Stress	A		No defect
12	Demensional Stability	E-4/105+des+E -2/150	Um/cm	+/-5.0
13	TG	DSC	⁰ C	$\geq 130^{\circ}\text{C}$
14	TD	(⁰ C/TGA 5% wt loss)	⁰ C	300-310 ⁰ C

