
General Specification:

Thickness		Copper Cladding		Standard Size	
<u>inch</u>	<u>(mm)</u>	<u>oz</u>	<u>(μm)</u>	<u>inch</u>	<u>(mm)</u>
0.003	(0.076)	Unclad		37 x 49	(941 x 1246)
to				41 x 49	(1043 x 1246)
0.125	(3.175)			43 x 49	(1094 x 1246)

* Special thickness of CCL can be discussed upon customer request.

Characteristics:

- Di-functional Epoxy
- Woven E-Glass
- Unclad (copper clad of different thickness maybe possible depends on request)

Features:

- Stable dimensional stability and thickness uniformity
- Stable thermal and chemical resistance
- Stable mechanical properties
- $T_g \geq 130^{\circ}\text{C}$ (by DSC)

Remarks: Not recommended for Lead-free process

Test Items		Units Metric (English)	Test Condition	IPC Spec.	Typical Value	Test Method (IPC-TM-650)
Electrical	Dielectric Constant (1MHz)	—	C-96/23/50	< 5.4	4.7	2.5.5.2
	Loss Tangent (1MHz)	—	C-96/23/50	< 0.035	0.022	2.5.5.2
	Volume Resistivity	MΩ -cm	C-96/23/50	> 10 ⁶	> 10 ¹⁰	2.5.17.1
	Surface Resistivity	MΩ	C-96/23/50	> 10 ⁴	> 10 ⁹	2.5.17.1
Physical	Warp & Twist	%	—	< 1.0	< 0.5	2.4.4
	Moisture absorption	%	E-1/105+D-24/23	< 0.8	< 0.2	2.6.2.1
Thermal	Glass Transition Temp	°C	DSC	> 110	> 130	2.4.25
	Z-Axis CTE	%	Expansion (50~260°C)	—	< 4.2	2.4.24
	Thermal stress	sec	288°C Solder dipping	> 10	> 120	2.4.13.1
	Flammability	—	A & E-24/125	V-0	V-0	UL 94

※ Specification Sheet : IPC-4101/21

● Ordering Information :

◎ Phone : +886-3-386-4289

◎ Email : sales@shinemo.com.tw

NOTE:

1. Typical Values are for information purpose only.
2. Any sale of these products will be governed by the terms and conditions of the agreement under which they are sold.