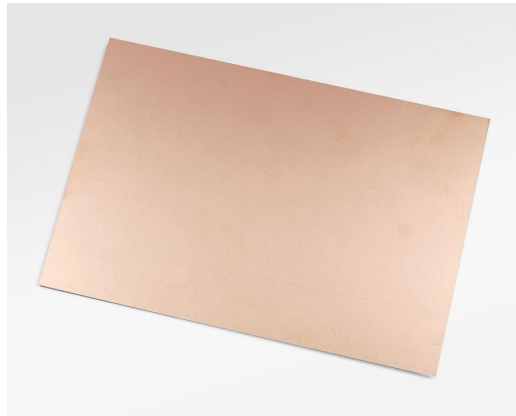


Plain Copper FR4 Single & Double Sided Fibre Glass Laminate



Raw Copper Clad Double/Single Sided Laminate PCB material ideal for use with CNC Isolation Routing Drilling Machines, Dry Film Laminators, Screen Printed Resists, LDI Laser Direct Imaging or Etch resist transfers or ink Etch Resist pen. Manufactured and tested in accordance with IPC4101C/21.

Suitable etchants include Ferric Chloride or Fine Etch Crystals.

Specifications:	
Thickness	1.6mm FR4 Epoxy Glass Laminate
Copper foil	35/00 Micron 1oz Single Sided 35/35 Micron 1/1oz Double Sided
Dissipation factor	35
Dielectric constant	5.4
Solderbath resistance (260°C)	20 secs

Standard sizes available:-

160 x 100 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
100 x 220 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
203 x 114 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
233.4 x 160 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
233.4 x 220 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
305 x 457 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)
510 x 11150 x 1.6mm (35/00um Single Sided and 35/35 Double Sided)

Other sizes and thicknesses available by request

- 相容紫外光阻擋及光學自動檢查功能,可提高 PCB 生產效率與準確性
UVB and AOI (automatic optical inspection) compatible, so as to increase productivity and accuracy.
- 優良的耐熱性能和機械性能
Excellent heat resistance and mechanical properties
- 符合 IPC-4101B 的規範要求
IPC-4101B specification is applicable .

General Properties 一般特性

Test Item 測試項目	Unit 單位	Test Method (IPC-TM-650) 測試方法	Test Condition 處理條件	Spec 規格值	Typical Value 典型值
Peel Strength (IOZ) 銅箔剝離強度	N/mm	2.4.8	125°C	≥0.70	1.70
			Float 288°C / 10Sec	≥1.05	1.75
Thermal stress 熱應力	Sec	2.4.13.1	Float288°C/unetched	≥60	180
Bow / Twist 彎弓度/翹曲度	%	2.4.22.1	A	≤1.0	0.17 / 0.35
Flexural Strength 抗彎強度	N/mm ²	2.4.4	Warp	≥415	565
			Fill	≥345	416
Flammability 燃燒性	Rating	UL94	UL94	UL94 V-0	V-0
Glass Transition (Tg) 玻璃化转变温度	°C	2.4.25	E-2/105 DSC	≥130	135
Surface Resistance 表面電阻	MΩ	2.5.17.1	C-96/35/90	≥1.0×10 ⁴	1.0×10 ⁶
Volume Resistance 體積電阻	MΩ-cm	2.5.17.1	C-96/35/90	≥1.0×10 ⁶	1.0×10 ⁸
Dielectric Constant 介電常數	—	2.5.5.2	Etched/@1 MHZ	≤5.4	4.5
Loss Tangent 介質損耗	—	2.5.5.2	Etched/@1 MHZ	≤0.035	0.022
Arc Resistance 耐電弧性	Sec	2.5.1	D-48/50+D-0.5/23	≥60	125
Moisture Absorption 吸水率	%	2.6.2.1	D-24/23	≤0.35(min0.51mm)	0.21
				≤0.80(max0.51mm)	0.19
Z-Axis Expansion Z-轴热膨胀系数	ppm/°C	2.4.24	E-2/105 TMA	—	48/284
TD	°C	2.4.24.6	TGA	—	310
T-260	min	2.4.24.1	TMA	—	20
T-288	min	2.4.24.1	TMA	—	3

Remarks: Specimen Thickness: 1.6 mm 1/1 樣品厚度：1.6 mm 1/1

A= Keep the specimen originally without any process 保持原樣,不作處理

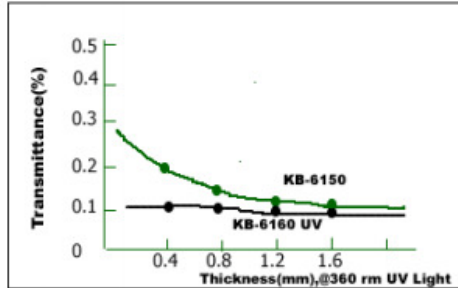
C= Temperature and humidity conditioning 在恒溫恒濕的空氣中處理;

D= Temperature conditioning immersion in distilled water. 浸在恒溫的水中處理

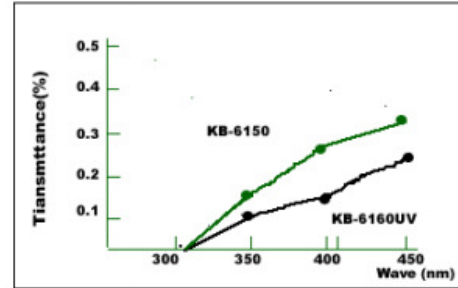
E= Immersing in distilled water with temperature control 在恒溫的空氣中處理;

Speciality Chart 板材特性圖

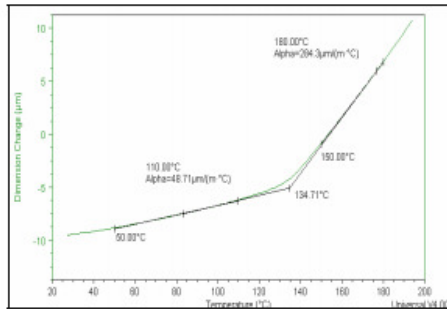
UV blocking (thickness) UV 阻擋



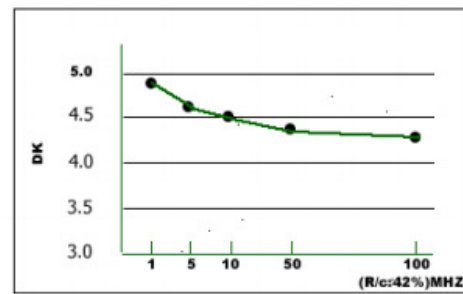
UV blocking (wave / UV-3100)



Thermal expansion of Z-direction (test by TMA)



Dielectric constant 介電常數



應用領域/Applications

- 電腦及週邊設備、通訊設備、儀器儀錶、辦公自動設備等
- Computer, communication equipment instrumentation, OA equipment, etc.

Purchasing Information / 採購資訊

Base colour 基板顏色	Thickness 厚度	Copper Cladding 銅箔厚度	Regular Size (mm) 常規尺寸	CTI Value CTI 值
黃色 (yellow)	0.05mm ~ 3.5mm	12µm, 18µm 35µm, 70µm 105µm	1093*1245mm (43" *49") 940*1245mm (37" *49") 1042*1245mm (41" *49")	KB-6160:150V KB-6160A:175V KB-6160C: 600V

Note: Other sheet size and thickness could be available upon request.

可根據客戶要求提供其他尺寸和厚度。