

# Copper Clad Boards 500 Series





We offer <u>1/16</u>", <u>1/32</u>" and <u>1/64</u>" FR4 laminate with 1 ounce copper per square foot. This flame retardant laminate is translucent in color and made of continuous woven glass cloth impregnated with epoxy resin. The copper on 1 ounce boards is 1.34mil

thick (0.0341mm, 34.1 microns). The boards are made of FR4 which is a flame retardant version of G-10 material.

Developed specifically for the circuit processing industries' requirements. Complies with UL #E214381 (select boards comply to UL #E213990). Provides ultraviolet blocking and fluorescence when using automated optical inspection (AOI).

Our presensitized boards provide high resolution and excellent fine line control. They are ideal for prototypes, small production runs, and student training.

Easy Cutting!! We also offer a large thin (12" x 18" x 1/32 inch) cat#675 paper phenolic presensitized board, perfect for cutting into smaller boards with no special equipment - perfect for the classroom.

Property	Treatment Condition	Unit	FR-4 Index
Peel Strength (As received)	А	Ib/in	>= 8.0
(After thermal stress)	A	Ib/in	>= 8.0
Surface Resistivity at elevated temperature	E-24/125	M Ohm	>= 10 <sup>3</sup>
Volume Resistivity	E-24/125	M Ohm · cm	>= 10 <sup>3</sup>
Water Absorption (0.1-0.77MM)	E-1/105+des+D-24/23	%	<=0.8
(0.78-3.20MM)	E-1/105+des+D-24/23	%	<=0.35
Flexural Strength (Lengthwise)	А	Мра	>=410
(Crosswise)	А	Мра	<=340
Dielectric Breakdown Parallel to laminate	D-48/50+D-0.5/23	KV	>=40

### **Specifications**

Dielectric Constant Permittivity at 1MHZ	C-40/23/50		<=5.4
Bow and Twist (Double sided)	А	%	<=1.0
Flammability Rating	A&E-1/105+des		UL 94 V-0
Thermal stress(288°C, 20 seconds)	Unetched,	А	No defect
	After etched	А	No defect
Pressure vessel thermal stress	А		No defect
Dimensional stability	E-4/105+des+E-2/150	Um/em	+/-5.0
TG	DSC	°C	>= 130°C
TD	( °C/TGA 5% wt loss)	°C	300-310°C

### Available Sizes

Cat.No.	Plain (metric)	(approx. in imperial)	
FR4 1/16" (1.60mm), single sided			
503 506 509 512 515 521 521 573 575 580	76 x 172 mm 101 x 152 mm 152 x 152 mm 152 x 228 mm 203 x 254 mm 304 x 304 mm 304 x 457 mm 609 x 914 mm 914 x 1219 mm	3" x 5" 4" x 6" 6" x 6" 6" x 9" 8" x 10" 12" x 12" 12" x 18" (BULK - 25 pack) 24" x 36" 36" x 48"	
FR4 1/16" (1.60mm), double sided			
550 555 576 585	152 x 152 mm 304 x 304 mm 609 x 914 mm 914 x 1219 mm	6" x 6" 12" x 12" 24" x 36" 36" x 48"	
FR4 1/32"	(0.80mm), single sided		
586 588 590	101 x 152 mm 152 x 228 mm 304 x 304 mm	4" x 6" 6" x 9" 12" x 12"	
FR4 1/32" (0.80mm), double sided			
587 589 591 596	101 x 152 mm 152 x 228 mm 304 x 304 mm 914 x 1219 mm	4" x 6" 6" x 9" 12" x 12" 36" x 48"	
FR4 1/64" (0.40mm), single sided			
597	152 x 228 mm	6" x 9"	
FR4 1/64" (0.40mm), double sided			
598	152 x 228 mm	6" x 9"	

# **Prototyping : Copper Clad Boards**



**Copper Clad Board** 



A 1/16", 1/32", 1/64" laminate with 1 once copper. This flame retardant laminate is made of continuous woven glass cloth impregnated with epoxy resin. Developed specifically for the circuit processing industries' requirements. Provides ultraviolet blocking and fluorescence when using automated optical inspection (AOI).

Format	Cat. No.	Approximate Size
Single sided 1/16" (1.60mm)	503	3"x 5" (76mm x 127mm)
	506	4"x 6" (101mm x 152mm)
	509	6"x 6" 152mm x 152mm)
	512	6"x 9" (152mm x 228mm)
	515	8"x 10" (203mm x 254mm)
	521	12" x 12" (304mm x 304mm)
	575	24" x 36" (609mm x 914mm)
	580	36" x 48" (914mm x 1219mm)
Double sided 1/16" (1.60mm)	550	6"x 6" 152mm x 152mm)
	555	12" x 12" (304mm x 304mm)
	576	24" x 36" (609mm x 914mm)
	585	36" x 48" (914mm x 1219mm)
Single sided 1/32" (0.80mm)	586	4"x 6" (101mm x 152mm)
	588	6"x 9" (152mm x 228mm)
	590	12" x 12" (304mm x 304mm)
Double sided 1/32" (0.80mm)	587	4"x 6" (101mm x 152mm)
	589	6"x 9" (152mm x 228mm)
	591	12" x 12" (304mm x 304mm)
	596	36" x 48" (914mm x 1219mm)
Double sided 1/64" (0.40mm)	598	6"x 9" (152mm x 228mm)

# Positive Presensitized



Available in 1/16" (62 mil) and 1/32" (30 mil) laminate with 1 ounce copper. Provides high resolution and excellent fine line control. Ideal for prototypes, small production runs, student training.

Format	Cat. No.	Approximate Size
Single sided 1/16" (1.60mm)	603	3"x 5" (75mm x 125mm)
	606	4"x 6" (100mm x 150mm)
	609	6"x 6" (150mm x 150mm)
	612	6"x 9" (150mm x 230mm)
	630	8"x 12" (200mm x 300mm)
Double sided 1/16" (1.60mm)	650	6"x 6" (150mm x 150mm)
	660	6" x 9" (150mm x 230mm)
Single sided 1/32" (0.80mm)	687	4"x 6" (100mm x 150mm)
	689	6" x 9" (150mm x 230mm)
Double sided 1/32" (0.80mm)	690	6"x 9" (150mm x 230mm)
Double sided 1/64" (0.40mm)	698	6"x 9" (152mm x 228mm)

## Paper Phenolic Positive Presensitized CCB

#### 1/32" laminate with one ounce copper

Easily cut this material into custom sizes. Score on both sides with a utility knife and snap in half.

Format	Cat. No.	Size
Single sided 1/32" (0.80mm)	675	12"x 18" (300mm x 450mm)
Double sided 1/32" (0.80mm)	676	8"x 12" (200mm x 300mm)