



PRE-SENSITISED PHOTOPOSITIVE BOARDS

Positive Epoxy FR4
Positive Bakelite

16/10th - 35 μ
15/10th - 35 μ

Size in mm	Bakelite 15/10th 1 side	Epoxy 1 side Reference	Epoxy 2 sides
75 x 100	AC 7	AA 7	AB 7
100 x 150	AC 10	AA 10	AB 10
100 x 160	AC 16	AA 16	AB 16
150 x 200	AC 15	AA 15	AB 15
200 x 300	AC 20	AA 20	AB 20
300 x 600	AC 60	AA 60	AB 60
600 x 900	AC 90	AA 90	AB 90

Positive Epoxy FR4

8/10th - 35 μ

Size in mm	Epoxy 1 side Reference	Epoxy 2 sides
100 x 160	AAB 16	ABB 16
200 x 300	AAB 20	ABB 20
300 x 600	AAB 60	ABB 60
600 x 900	AAB 90	ABB 90

Positive Epoxy FR4

4/10th - 35 μ

Size in mm	Epoxy 1 side Reference	Epoxy 2 sides
100 x 160	AAC 16	ABC 16
200 x 300	AAC 20	ABC 20
300 x 600	AAC 60	ABC 60
600 x 900	AAC 90	ABC 90

Positive Epoxy FR4

16/10th - 70 μ

Size in mm	Epoxy 1 side Reference	Epoxy 2 sides
100 x 160	AA 716	AB 716
200 x 300	AA 720	AB 720
300 x 600	AA 760	AB 760
600 x 900	AA 790	AB 790

Teflon (Duroïd)

16/10th - 35 μ

High frequency sensitised, double sided.
Di-electric constant 2,4 - 2,6 (± 0,04).

Size in mm	2 sides Reference
100 x 160	ABT 16
200 x 300	ABT 23
406 x 915	ABT 47

Teflon (Duroïd)

8/10th - 35 μ

High frequency sensitised, double sided.
Di-electric constant 2,4 - 2,6 (± 0,04).

Size in mm	2 sides Reference
200 x 300	ABT 18
300 x 600	ABT 186

- Blue colored positive resin, without marbles
- Micro definition, resin thickness 2.5μ.
- Adhesive anti UV-protection
- 5 years shelf life guaranty.
- Individual packaging in plastic bag up to size 200 x 300 mm.



Special cut out price per m2 upon request
For FR 4 in 2/10th - 35μ please consult CIF

UNCOATED PCB LAMINATES

Epoxy FR4
Bakelite

16/10th - 35 μ
15/10th - 35 μ

High quality laminate with 8 layers of fibre glass. Standard MIL 13949 for the FR4 UL94 Vo. Individual packaging in plastic bag upto size 200x300

Size in mm	Bakelite 15/10th 1 side Reference	Epoxy 1 side	Epoxy 2 sides
75 x 100	AF 7	AD 7	AE 7
100 x 150	AF 10	AD 10	AE 10
100 x 160	AF 16	AD 16	AE 16
150 x 200	AF 15	AD 15	AE 15
200 x 300	AF 20	AD 20	AE 20
300 x 300	AF 30	AD 30	AE 30
300 x 600	AF 60	AD 60	AE 60
600 x 900	AF 90	AD 90	AE 90

Epoxy FR4

8/10th - 35 μ

Special cut out price per m2 upon request For FR 4 in 4/10th and 2/10th please consult CIF

Size in mm	Epoxy 1 side Reference	Epoxy 2 sides
100 x 160	ADB 16	AEB 16
200 x 300	ADB 20	AEB 20
300 x 600	ADB 60	AEB 60
600 x 900	ADB 90	AEB 90

Flexible Circuits

Bare
Insulation 50 μ - copper cladding 35 μ.

Size in mm	1 side Reference	2 sides
100 x 600	AN 10	AN 210
200 x 600	AN 20	AN 220
600 x 900	AN 60	AN 260

Presensitised photopositive

Insulation 50 μ - copper cladding 35 μ.

Size in mm	1 side Reference
100 x 600	AQ 10
200 x 600	AQ 20

ALUMINIUM PHOTOPOSITIVE CIRCUITS

Thermic dissipation > 1°C / Watt / mm2

- Heat dissipation >1 °C / Watt / mm2
- Adhesion to copper > 22N/cm
- Working Temperature 130 °C continuous
- Electrical strength (for 100μ) 51 KV/mm
- Di-electric constant = 3 at 1MHz • Dissipation power 0,35 Watt /dm2 / °C

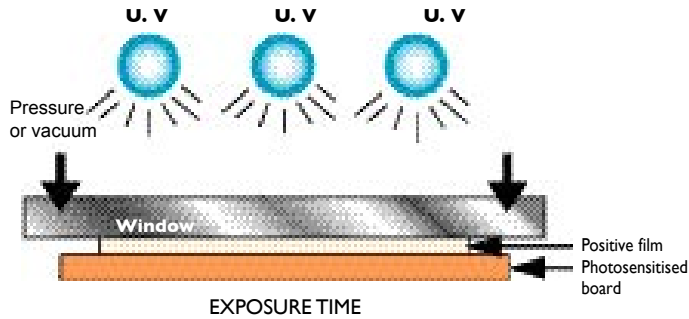
Size in	Reference
100 x 150	AAT 10
200 x 300	AAT 20
300 x 600	AAT 30
620 x 920	AAT 61



Positive presensitised boards, general information



CIF photosensitised boards have a strong and very adhesive cover, blue-purple coloured and a thickness of 2.5 microns. This out of dust resin permits a resolution of about 2 microns. Sensitivity to light: 365 nanometres (UV). Kept out of humidity, in black and fresh area, CIF boards are 5 years guaranteed.



INSTRUCTION NOTICE

EXPOSURE

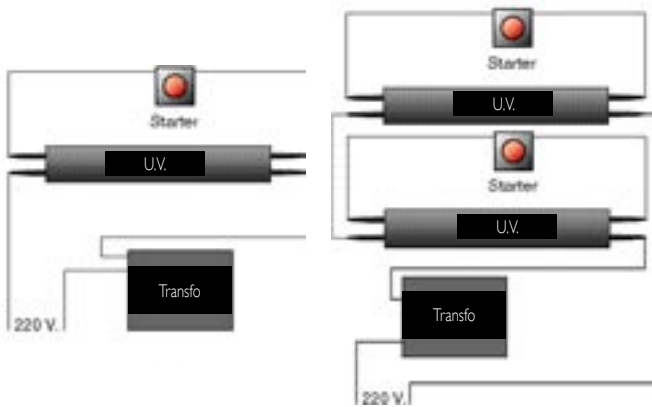
Do not handle under a strong light or near a shiny window. Take the white anti-UV adhesive cover off. Install the mylar (locating copper or components way); contact between photosensitised layer and board must be perfect to avoid light diffraction through the mylar thickness.

ALIMENTATION OF ONE OR TWO UV-TUBES

With a single sided foam pressure machine: 2 to 2.30 min (CIF machine type M110-16)

With a vacuum machine: 90sec to 2 min (CIF machine type DFT3040). In case of vegetal copy use, time has to be increased from 20 to 30% depending on the thickness of the copy.

Nota: in any case, with a good film quality, it is better you overinsulate than underinsulate.



DEVELOPMENT

In a tray containing 1 litre of CIF developer (bag to be diluted or ready to use solution), put the circuit and shake at 20°C. Development must take between 30 to 90 sec.

Insulated photosensitised resin is totally dissolved in the developer: Development in machine needs a special developer (item code AR26).

After development, clean with water before etching.

ETCHING

In a tray use a ferric chloride at 36°B. In a foam machine, use a ferric chloride at 41°B. In a spraying machine, use a boosted ferric chloride (cleaner and more constant etching time).

STRIPPING

CIF resin is thermoweldable ; it can be let on the board even during cutting and drilling operations. To get it off, use the CIF stripper or a stamp full of alcohol.

TABLE OF PROBLEMS AND THEIR SOLUTIONS

PROBLEMS				
Photosensitised circuits. Development can not be done.	Cut circuit during development or blur development	Holes in copper after etching	No etching	Thin pads, reduced after etching
CAUSES				
Too short time exposure. Too low development T°. Saturated developer	Bad contact of the original upon the board. Too thick mylar. Drawing is not black enough. Cuts on the drawing.	Overinsulated board. Drawing not opaque enough. Bad contact. Too long etching time.	Resin remains on the board. Saturated etching agent.	Les UV passent sur l'original. Phénomène de sous gravure. Mylar trop épais.
SOLUTIONS				
Make tests with a grey scale (CIF test film) and a new developer. Mini T° 18°C	Better the pressure or verify the machine. Make a contact film (CIF reprophane film). Control the light box.	Verify the original and make tests with grey scale (CIF test film)	Increase exposure and development times. Change the etching agent.	Better the contact and the etching system. Make a contact film. Upside down transfers.

ACCEPTABLE INTENSITY IN A PRINTED CIRCUIT TRACK:

Thickness of copper: 35 microns for a temperature difference (D T°) of 20°C.

Conductor width in mm	0,4	0,72	1,14	1,8	2,5	3,5	4,5	5,0	7,1
Acceptable intensity in A	1,3	2,7	3,8	5,2	6,8	8,3	9,7	11,2	13,0