



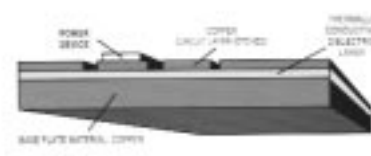
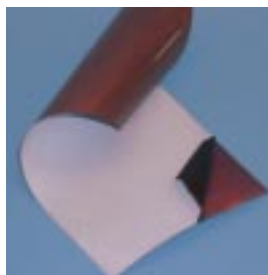
- Blue colored positive resin, without marbles
- Micro definition, resin thickness 2.5μ.
- Adhesive anti UV-protection
- 5 years shelf life guaranty.
- Individual packaging in plastic bag up to size 200 x 300 mm.



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



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



## PRE-SENSITISED PHOTOPOSITIVE BOARDS

**Positive Epoxy FR4**  
**Positive Bakelite**

16/10<sup>th</sup> - 35 μ  
15/10<sup>th</sup> - 35 μ

| Size in mm | Bakelite<br>15/10th 1 side | Epoxy<br>1 side<br>Reference | Epoxy<br>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**

8/10<sup>th</sup> - 35 μ

| Size in mm | Epoxy<br>1 side<br>Reference | Epoxy<br>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**

4/10<sup>th</sup> - 35 μ

| Size in mm | Epoxy<br>1 side<br>Reference | Epoxy<br>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**

16/10<sup>th</sup> - 70 μ

| Size in mm | Epoxy<br>1 side<br>Reference | Epoxy<br>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)**

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

16/10<sup>th</sup> - 35 μ

| Size in mm | 2 sides<br>Reference |
|------------|----------------------|
| 100 x 160  | ABT 16               |
| 200 x 300  | ABT 23               |
| 406 x 915  | ABT 47               |

**Teflon (Duroïd)**

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

8/10<sup>th</sup> - 35 μ

| Size in mm | 2 sides<br>Reference |
|------------|----------------------|
| 200 x 300  | ABT 18               |
| 300 x 600  | ABT 186              |

## UNCOATED PCB LAMINATES

**Epoxy FR4**  
**Bakelite**

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

16/10<sup>th</sup> - 35 μ  
15/10<sup>th</sup> - 35 μ

| Size in mm | Bakelite<br>15/10th 1 side<br>Reference | Epoxy<br>1 side | Epoxy<br>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**

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

8/10<sup>th</sup> - 35 μ

| Size in mm | Epoxy<br>1 side<br>Reference | Epoxy<br>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<br>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<br>Reference |
|------------|---------------------|
| 100 x 600  | AQ 10               |
| 200 x 600  | AQ 20               |

## ALUMINIUM PHOTOPOSITIVE CIRCUITS

**Thermic dissipation > 1 °C / Watt / mm2**

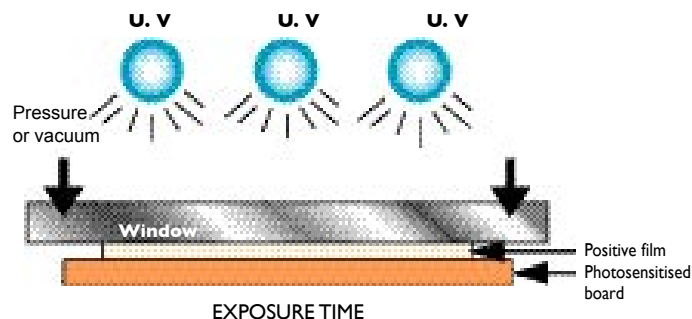
- Heat dissipation > 1 °C / Watt / mm2
- Adhesion to copper > 22N/cm
- Working Temperature 130 °C continuous
- Electrical strength (for 100μ) 51 KV/mm
- Di-electric constant = 3 at 1MHz • Dissipation power 0,35 Watt /dm2 / °C

| 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 photosensitized 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 photosensitized 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 MII0-16)

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