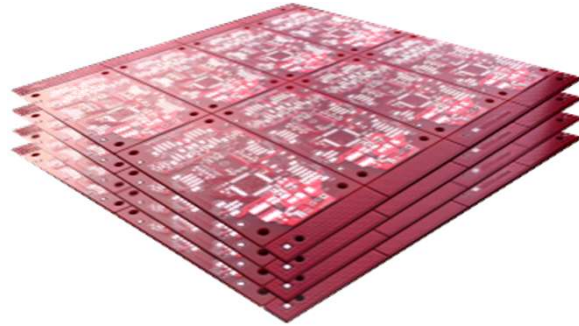




Tecnometal Srl

YES! WE DO IT FASTER & BETTER ...



... AND MORE!
ELECTRONICS INDUSTRY SERVICES



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TYPOLOGIES & TECHNOLOGIES

PCB TYPOLOGY

Single Side	Flexible
Double Side	Rigid Flexible
Multilayer	Back Panel
PCB Hibrid	SEMI-FLEX

APPLIED TECHNOLOGY

Press-Fit	PCB impedance controlled
Micro Drilling	Blind Drilling
Foratura Interrata	Very Fine line
Fine Pitch	Micro BGA



AVAILABLE MATERIALS

MATERIAL FR4

- LOW TG 135°C
- MEDIUM TG 150°
- HIGH TG >170°C

**MATERIALS WITH
UNI CEI 11170
CERTIFICATION**

**ARLON
TEFLON
TACONIC
KAPTON**

**FLEX/SEMIFLEX
THERMAL CLAD
PCB HIBRID FR4-ALLUMINIUM**



CAPABILITY 1/4

CIRCUIT MAXIMUM SIZES	STANDARD	ADVANCE	R&D
Circuit Single Layer/Double layer	500x600mm	500x600mm	500x600mm
Circuit Multilayer	490x600mm	490x600mm	490x600mm
Circuit maximum thickness	3.2 mm	4,8 mm	5 mm
Circuit minimum thickness	0.10mm DF - 0.35÷0.40mm ML	0.10mm DF - 0.35÷0.40mm ML	0.10mm DF - 0.35÷0.40mm ML
Base copper	17 ÷ 210m	12 ÷ 210m	9 ÷ 210m
DRILLING	STANDARD	ADVANCE	R&D
Minimum diameter Metallized hole	0.10mm	0.1mm	0.1mm
Tolerance Metallized hole	±0.05mm/+0,1	±0.75mm	±0.75mm
Tolerance Metallized hole Press-Fit	±0.05mm <i>(only with chemical finishing surface)</i>	±0.05mm <i>(only with chemical finishing surface)</i>	±0.05mm <i>(solo con finiture chimiche)</i>
Tolerance Non Metallized hole ≤ 6,5 mm	± 0.05mm	± 0.05mm	± 0.05mm
ASPECT RATIO	STANDARD	ADVANCE	R&D
Final holes da 0.20mm	8:1	8:1	8:1
Final holes da 0.50mm	8:1	8:1	8:1
Blind holes	1:1	1:1	1:1



CAPABILITY 2/4

TRACE & SPACING	STANDARD	ADVANCE	R&D
Base Cu 17μ Min. Conductor Width	120 μ	100 μ	90 μ
Base Cu 17μ Min. Conductor Spacing	120 μ	90 μ	90 μ
Base Cu 35μ Min. Conductor Width	150 μ	120 μ	120 μ
Base Cu 35μ Min. Conductor Spacing	150 μ	120 μ	120 μ
Base Cu 70μ Min. Conductor Width	200 μ	180 μ	180 μ
Base Cu 70μ Min. Conductor Spacing	200 μ	180 μ	180 μ
INTERAXIS MECHANICAL DRILL	STANDARD	ADVANCE	R&D
Diameters ≤ 0.70mm	±50μ	±50μ	±50μ
Diameters > 0.70mm	±70μ	±70μ	±70μ
ROUTING PRECISION	STANDARD	ADVANCE	R&D
Standard	±0.10mm	±0.05mm	±0.05mm



CAPABILITY 3/4

PLATED SLOT	STANDARD	ADVANCE	R&D
Dimensional Tollerance	$\pm 0,1\text{mm}$	$\pm 0,1\text{mm}$	$\pm 0,05\text{mm}$
COUNTERBORES/CONTERSINKS	STANDARD	ADVANCE	R&D
Depth Tollerance	$\pm 0,20\text{mm}$	$\pm 0,20\text{mm}$	$\pm 0,15$
HOLE INTERAXES	STANDARD	ADVANCE	R&D
Holes Interaxes Mechanical Profile	$\pm 0.1\text{mm}$	$\pm 0.1\text{mm}$	$\pm 0.1\text{mm}$
SCORING	STANDARD	ADVANCE	R&D
V-Cut angle	30°	30°	30°
FR4 core tollerance	$\pm 0,1\text{mm}$	$\pm 0,1\text{mm}$	$\pm 0,05\text{mm}$
CEM core tollerance	$\pm 0,1\text{mm}$	$\pm 0,1\text{mm}$	$\pm 0,1\text{mm}$
FINAL THICKNESS	STANDARD	ADVANCE	R&D
PCB Final Thickness	$\pm 10\%$	$\pm 10\%$	$\pm 5\%$



CAPABILITY 4/4

SOLDER RESIST DEFINITION	STANDARD	ADVANCE	R&D
Bridge Green and Red Colors	100μ Verde 120μ other colors	90μ Verde 120μ other colors	90μ Verde 120μ other color
Bridge White Color	130μ	130μ	130μ
Bridge Black Color	130μ	130μ	130μ
ELECTRICAL TEST	STANDARD	ADVANCE	R&D
Maximum testing board	610x610mm	610x610mm	610x610mm
Electrical test tension	10÷250V	10÷250V	10÷250V
Minimum pad testable	100μ	100μ	100μ
IMPEDANCE TOLLERANCE	STANDARD	ADVANCE	R&D
Maximum tollerance	10%	5%	3%



TRADE MARK

SERIAL NUMBER

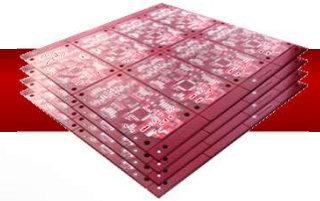
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BARCODE



QR CODE/DATAMATRIX





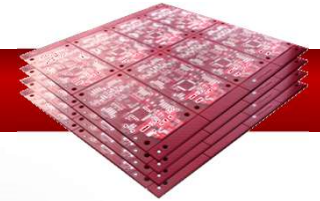
SURFACE FINISHING 1/4

HASL

- **ADVANTAGES:** Maximum Solderability- Reworkable- Shelf Life 12 months - RoHS compliant – Recommended for multiple welds
- **DISADVANTAGES:** Not recommended in presence of BGA <1mm or Very fine pitch – Thickness can vary to 1-25 microns 2 a 50µm

HASL lead free

- **ADVANTAGES :** Maximum Solderability- Reworkable- Shelf Life 12 months - Recommended for multiple welds
- **DISADVANTAGES :** : Not recommended in presence of BGA <1mm or Very fine pitch – Thickness can vary to 1-25 microns 2 a 50µm, no RoHs Compliant



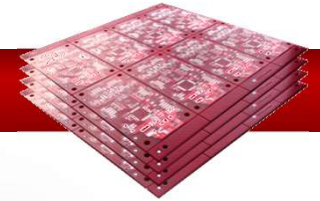
SURFACE FINISHING 2/4

ENIG

- **ADVANTAGES** : excellent flatness, Recommended for Very fine Pitch and micro BGA
- **DISADVANTAGES** : Shelf life 6 months, Solderability limited in time, Careful Handling

CHEMICAL TIN

- **ADVANTAGES** : Excellent flatness, Recommended for Press-fit technology
- **DISADVANTAGES** : Shelf life 3 months, NO multiple welding, Careful Handling, easy surface contamination



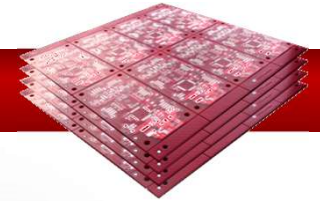
SURFACE FINISHING 3/4

CHEMICAL SILVER

- **ADVANTAGES** : Excellent flatness, Recommended for Press-fit technology , Reworkable
- **DISADVANTAGES** : Shelf life 3 months, NO multiple welding, Careful Handling, Possible surface contamination

OSP

- **ADVANTAGES** : Excellent flatness – Reworkable- Good Wettability
- **DISADVANTAGES** : : Shelf life 3 months, NO multiple welding, Careful Handling, easy surface contamination



SURFACE FINISHING 4/4

ELECTROLITIC SILVER

- **ADVANTAGES** : Excellent Flatness— Recommended for sliding contacts
- **DISADVANTAGES** : Not recommended for welding

ELECTROLITIC GOLD

- **ADVANTAGES** : Excellent Flatness— Recommended for sliding contacts
- **DISADVANTAGES** : Not recommended for welding, High Price