

MicroConnex Flex Circuit Capabilities

MicroConnex's fabrication capabilities enable us to provide our customers with a wide range of options to help facilitate the production of their most demanding designs. We offer innovative solutions to challenging high density interconnect designs and can support prototype to mid-volume production quantities.

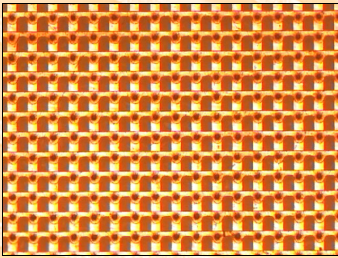
CAPABILITIES

- Single, Double and Multilayer boards
- Select Rigid-flex constructions
- Laser windowing and ablation
- Lines and Spaces to 25 micron. (Smaller features are possible but are design – dependent)
- Flying or unsupported Leads
- Stiffeners (FR-4, Polyimide Cirlex etc.)
- Unique Metalizations (all gold, iridium Oxide for example)
- Sputtered thin films
- Bumping
- Shield layers
- Laser drilled Blind, buried and through hole vias with minimum 25 micron diameter

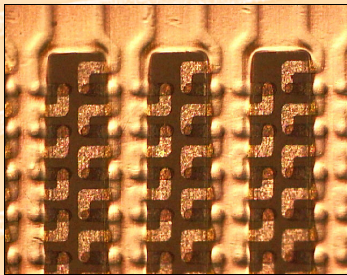
MATERIALS

- **Base Materials**
 - Polyimide/Kapton
 - 25 micron
 - 50 micron
 - 75 micron
 - others as available
 - LCP (design dependent)
 - BT (design dependent)
 - PEEK (design dependent)
- **Metals**
 - Copper
 - Nickel
 - Gold
- **Cover layers**
 - Laminated Polyimide
 - Photoimageable Solder mask (LPI)
 - Others on request
- **Finishes**
 - Gold (design dependent)
 - ENIG
 - ENEG
 - OSP
 - Electroplated Nickel
 - Copper

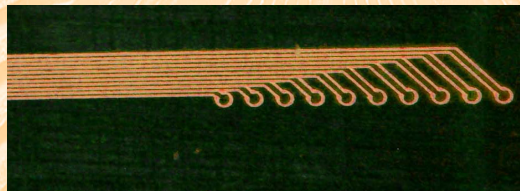
Semiconductor Test
Semiconductor Packaging
Medical Devices
Sensors
Industrial applications



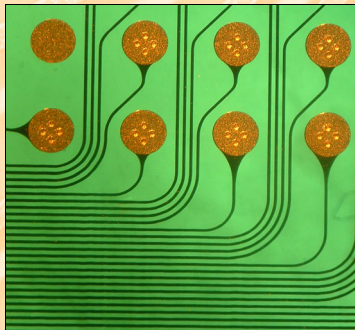
Large array of 25 micron vias



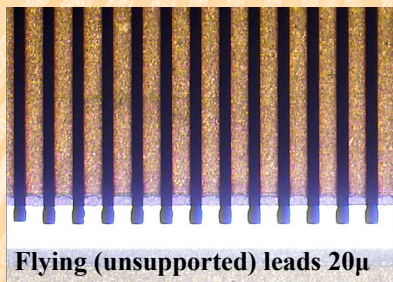
Thin Film Thermocouple array



Flying (unsupported) leads 20μ



Multiple blind vias in pads with 25μ line and space



General Design Guidelines

The following are intended as guidelines only. Please do not hesitate to call with questions.

Common Material Thicknesses: Other material choices may be available.

Material	Polymer thickness	Cu Thickness					
		2μ	9μ	12μ	18μ	35μ	70μ
Nippon	12μ			X			
"	12μ				X		
Nova Clad	25μ	X					
"	50μ	X					
Dupont AP	25μ		X	X	X	X	
	50μ		X	X	X	X	
	75μ			X	X	X	X
	100μ			X	X	X	X
	125μ			X	X	X	X
	150μ			X	X	X	X
LCP	Please call						
PEEK	Please call						

Vias: Min. diameter vs. depth

Depth	50μ	100μ	250μ
Via Type			
Through Hole	25μ	25μ	25μ
Blind	50μ	75μ	1 25μ
Buried	25μ	25μ	50μ
Extra-fine	12μ	N/A	N/A

Miscellaneous

Cover Coats:

Liquid Photoimageable 25μ
Polyimide 25μ, 27μ, 60μ

Multilayer

4-10 Layers are typical (More are possible design dependent)

Copper Weight	2μ	5μ	9μ	12μ	18μ	36μ
Line Width	25μ	30μ	40μ	45μ	50μ	125μ