

Flex Circuit Fab Capabilities and Design Guidelines

Capability	Ultra High Density Interconnect
Layer Count (circuit layers)	6 layers typical, more based on design parameters
Minimum Trace and Space (Cu thickness dependent)	20 μm /20 μm
Laser Drill MicroVias to Pad	75 μm Pad with 25 μm Via
Plated MicroVias Size Laser Drill (Aspect Ratio)	6 to 1
Plated Blind MicroVias Size - Laser Drill	38 μm blind
Positional Accuracy of MicroVias (Material Dependent)	12 μm
Solder Mask Positional Tolerance	25 μm
Solder Mask Webbing	100 μm
PI Coverlay Positional Tolerance	50 μm
PI Coverlay Webbing	100 μm
PI Cover Lay Adhesive Bleed	75 μm
Bump Diameter	Bump Diameter 125 μm , Base Pad 200 μm , Post Height 15-45 μm
Layer to Layer Registration	25 μm
Imaged Feature to Laser Feature Registration	25 μm
Controlled Impedance	10%

Surface Finish

ENIG

Ni: 20-240 u" Au: 2-8 u"

Au (Electroplated Soft & Hard Au Available)
Au: 0.5-3.5 μm

ENEPIG

Ni: 100-150 u" Pd: 4-8 u" Au: 1-2 u"

Others available by request

Thin Film Metal Deposition

Film thickness: 5-3000 nm
Magnetron PVD with constant or pulse
DC, RF, and RF bias

Quality and Metrology

AOI and Repair for Shorts

KLA (Orbotech) AOI, KLA (Orbotech)
PerFix, View Pinnacle 250

Cross Section & Optical Microscopy

Via Plating Verification

XRF

Fisher XDV u-Poly Capillary with Silicon
Drift Detector, Spot Size of 20-30 μm ,
Better than 0.01 μm
Film Thickness Resolution

Flying Probe E-Test

Luther & Maelzer ATG A7
with eight flying probes

Dimensional Verification

Olympus STM7 Optical 500x
Microscope, x-y Stage and z-axis

Dimensional Verification

Polar Si8000 field solver

**Let's
connect.**

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to mature your idea
from prototype to
production, visit
MicroConnex.com.



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*Contact us to learn more about available
in house options for standard or reactive
sputtering. Custom film development
to target specific film composition and
morphology is available.