

Manufacturing Capabilities

Attributes	Standard	Advanced	Notes
Panel Sizes (Single Sided, Double Sided)	12" X 18", 18" X 24"	18" X 24"	
Panel Sizes (Multilayer)	12" X 18", 18" X 24"	18" X 24"	
Panel Sizes (Flexible Circuits)	12" X 18", 18" X 24"	18" X 30"	
Panel Sizes (Rigid-Flex)	12" X 18", 18" X 24"	18" X 24"	
Maximum Layers	12	30	
Flex layer Counts	2	8	
Rigid Flex Layer Counts	4	8	
Maximum Board Thickness	.125"	.200"	
Minimum Core Dielectric Thickness	.003"	.002"	
Minimum Prepreg Dielectric Thickness	.003"	.002"	
Minimum Copper Weight - Inner Layer (oz)	1/2 oz	N/A	
Minimum Starting Copper Weight - Outer Layer (oz)	3/8 oz	1/4 oz	
Maximum Copper Weight - Inner Layer (oz)	6 oz	8 oz	
Maximum Starting Copper Weight - Outer Layer (oz)	2 oz	14 oz	
Materials	Standard	Advanced	IPC-4101
Isola 370HR	Yes	Yes	/98/99/101/126
Isola 185HR	Yes	Yes	/98/99/101/126
Isola FR406-FR406N	Yes	Yes	/21/24/26
Isola IS402	Yes	Yes	/97/98/99/101
Nan Ya FR-4-86	Yes	Yes	/21
Nan Ya NP-180R	Yes	Yes	
Nan Ya NP-180TL	Yes	Yes	
Ventec VT-42	Yes	Yes	/21
Ventec VT-47	Yes	Yes	/97/98/99/101
Ventec VT-481	Yes	Yes	/97/98/99/101
Ventec VT-5A2	Yes	Yes	
Ventec VT-4B Seies	Yes	Yes	
Bergquist T-Clad	Yes	Yes	
Kingboard KB-6160	Yes	Yes	/21
Shengyi SN-L3	Yes	Yes	
Shengyi SN-L4	Yes	Yes	
Shengyi S1141	Yes	Yes	
Shengyi S1170	Yes	Yes	
Panasonic Megtron 6	Yes	Yes	
Panasonic R-F775	Yes	Yes	
Dupont Pyralux® FR Clads	Yes	Yes	
Rogers 3000 Series	Yes	Yes	
Rogers 4000 Series	Yes	Yes	
Rogers CITE	Yes	Yes	
Imaged Features	Standard	Advanced	Notes
Inner Layer Line Width	0.005"	0.003"	
Inner Layer Spacing	0.005"	0.003"	Hoz. Copper
External Layer Line Width	0.005"	0.003"	
External Layer Spacing	0.005"	0.003"	Hoz. Copper
Minimum Pad	0.015"	0.008"	
SMT Pitch	0.010"	0.008"	
Hole Technology	Standard	Advanced	Notes
Smallest Mechanical Drilled Via	0.0079"	0.006"	
Aspect Ratio	10:1	12:1	
PTH Tolerance {+/-}	0.003"	0.002"	
NPTH Tolerance {+/-}	0.001"	0.001"	
Minimum Cu Clearance to Hole	0.008"	0.006"	
Solder Mask/Legend	Standard	Advanced	Notes
LPI Solder Mask	Green, Blue, Red, Clear	Black, White, LED White	
Minimum Clearance	0.003"	0.002"	
Minimum Web	0.005"	0.004"	
Legend Color	White, Black	Yellow	
Surface Finish	Standard	Advanced	Notes
Electroless Nickel Immersion Gold (ENIG)	Yes	Yes	
Electrolytic Nicked Gold (ENEG)	Yes	Yes	Vertical Gold Tab
Electroless Nickel Electroless Palladium Immersion Gold (ENEPIG)	Yes	Yes	Outside Service
Immersion Silver	Yes	Yes	
Immersion Tin	Yes	Yes	Outside Service
Hot Air Solder Level (HASL)	Yes	Yes	
Lead Free Hot Air Solder Level (LF HASL)	Yes	Yes	
Organic Solderability Preservatives (OSP)	Yes	Yes	Outside Service

Fabrication	Standard	Advanced	Notes
IL Copper to Board Edge - Routed	.010"	.007"	
OL Copper to Board Edge - Routed	.008"	.005"	
"V" Groove Scoring - Profile Tolerance	+ / - .010"	+ / - .010"	Min Panel Thickness .031
Test	Standard	Advanced	Notes
Flying Probe Test	Yes	Yes	
TDR	Yes	Yes	
Ionics	Yes	Yes	
CMI XRF	Yes	Yes	
Additional Capabilities	Standard	Advanced	Notes
Buried/Blind Via	No	Yes	
Plugged Vias (mask)	No	Yes	
Castellated Holes	Yes	Yes	
Edge Plating	Yes	Yes	
Via Fill - Conductive/Non-Conductive	Yes	Yes	
Countersink/Counterbore/Beveling	Yes	Yes	
Milling/Controlled Depth	Yes	Yes	
Controlled Impedance	Yes + / - 10%	Yes + / - 5%	