

Capabilities	Standard	Advanced
Shop Panel Size	18" X 24"	21" X 24"
Layer Count	2 to 36	48+
PCB Laminate Materials		
FR4 Tg 180	Yes	Yes
Rogers	Yes	Yes
Polyimide	Yes	Yes
Megtron 4 & 6	Yes	Yes
RoHs Materials	Yes	Yes
Polyclad 370 HR	Yes	Yes
Halogen Free	Yes	Yes
Exotic Material Types	Yes	Yes
Finished Thickness [Multilayer]	.005" to .220"	.220"-.450"
Minimum Core Thickness	.003"	.002"
Finished Thickness Tolerance [+/-]	10%	7%
Multiple Laminations	5	7
Copper Foil Weights Internal	1/4 to 3	Up to 6 OZ.
Copper Foil Weights External	1/4 to 2	Up to 4 OZ.
Lines, Spaces, & Pad Diameters		
Internal Line Width	.003"	.0025"
Internal Spacing	.003"	.0025"
External Line Width	.003"	.0025"
External Spacing	.003"	.0025"
Int. Pad Size-A/R Per Side (Fin.-.001)	.005"	.004"
Ext. Pad Size-A/R Per Side (Fin.-.002)	.003"	.003"
SMT Pitch	.010"	.010"
Impedance	10%	5%
Electroplating		
Tin Lead Plating Thickness	.0003"-.0005"	Greater than .0005"
Tin Nickel - Plating Thickness	150Microinches	250 Microinches

Low Stress Nickel	100 Microinches	250 Microinches
Gold Plating Thickness	30 Microinches	As Specified
Hole Aspect Ratio	14 to 1	20 to 1
Conductor Finishes		
HASL	Yes	Yes
Solder with Reflow	Yes	Yes
White Tin	Yes	Yes
Carbon Ink	Yes	Yes
Lead Free Finishes		
Electroless Nickel/Palladium/Gold -ENEPIG	Yes	Yes
Electroless Nickel/Immersion Gold - ENIG	Yes	Yes
Immersion Silver	Yes	Yes
Entek Plus HT	Yes	Yes
HASL & HASL PB FREE	Yes	Yes
Tolerances		
Drilled Hole to Copper	.008"	.007"
Non-Plated Hole Tolerances [+/-]	.002"	.001"
Fabrication Tolerances [+/-]	.005"	.003"
Via Capabilities		
Laser Micro Vias	.004"	.002"
Blind/Buried Vias	.004"	.002"
Via Under PAD	Yes	Yes
Back Drill	Yes	Yes
Back drill Antipad	Yes	Yes
Castellation	Yes	Yes
Laser Drill	.004	.003
Mechanical Vias	.0059	.004
Tented LPI	Coated With LPI	Coated/plugged
Plugged UV Curable [no solvent]	Maximum .020"	Yes
Silver Conductive Via Fill	Yes	Yes
Non-Conductive ViaFill	Yes	Yes

Copper Filled Vias	Yes	Yes
Through Hole Copper Filled Via	Max 20 mils	Max 20 mils
Soldermask and Legend		
Minimum Mask Clearance [LPI]	.003"	.002"
Minimum Soldermask Thickness	0.0004"	0.0004"
Gasketed Chip Scale Packaging	.002"	.001"
Soldermask Type	LPI	Dry Film
Soldermask Color	Green	Any Color
Soldermask Web Minimum	.004"	.003"
Legend Color	White	Any Color
Legend Feature Size	.005" wide x .050" high	.006" wide x .03" high min
Flatness (Symmetrical construction)	IPC Standard	IPC Standard