

## Printed Circuit Board Solutions

# Defense & Aerospace Capabilities

ATTRIBUTES	STANDARD	ADVANCED	DEVELOPMENT (NPI Only)
Panel Size	12 x 18, 18 x 24	24 x 28	24 x 28 +
Rigid Layer Counts	2 - 28	30 - 38	40 +
Flex Layer Counts	2 - 6	8 - 10	12 +
Rigid Flex Layer Counts	4 - 14	16 - 24	26 +
<b>LAMINATES - MATERIALS</b>			
Pb Free RoHs - 180 Tg FR4	Yes	Yes	Yes
Med Loss - FR408 HR, -13EP	Yes	Yes	Yes
Low Loss - 13EPSI, I-Speed	Yes	Yes	Yes
Ultra Low Loss - Meg 6, I-Tera	Yes	Yes	Yes
Polyimide	Yes	Yes	Yes
Rogers Laminates	Yes	Yes	Yes
Flex - Dupont AP	Yes	Yes	Yes
Flex - Dupont LF	Yes	Yes	Yes
Flex - Dupont FR	Yes	Yes	Yes
Halogen Free	Yes	Yes	Yes
<b>IMAGED TRACE / SPACE / PAD</b>			
Internal Line Width	.003"	.002"	.0015"
Internal Spacing	.003"	.002"	.0015"
External Line Width	.003"	.002"	.0015"
External Spacing	.003"	.002"	.0015"
Minimum pad	.015"	.010"	.008"
Impedance Tolerance	10%	5%	<5%
SMT Pitch	.010"	.008"	.006"
<b>VIA - PTH TOLERANCES</b>			
Smallest Drilled Via	.0098"	.0071"	.0059"
Aspect Ratio	10:1	14:1	
Minimum Cu Clearance to Hole	.008"	.006"	.004"
PTH Tolerance [+/-]	.003"	.002"	.0015"
NPTH Tolerance	.001"	.001"	.001"
Back Drill Depth Tolerance	.005"	.003"	.002"
<b>HDI CAPABILITIES</b>			
Sequential Lamination	2x Lam Cycles	3-5x Lam Cycles	6x Lam Cycles
Laser Micro Vias	.0045"	.003"	.003"
Blind Aspect Ratio	.75:1	1:1	1.2:1
Blind/Buried Vias	.008"	.006"	.004"
Via in Pad	Epoxy or Copper Filled	-	-
Laser Routing Board Thickness	<.018 "	.040"- .062"	.062" +
<b>SOLDER MASK-NOMENCLATURE</b>			
Taiyo LPI	Green, Blue, Red	Black, White	All Colors
Minimum Clearance	.003"	.002"	.001"
Minimum Web	.004"	.003"	.002"
Legend Color	White	Black, Yellow, Orange	All Colors
<b>TEST &amp; MEASUREMENT</b>			
Flying Probe Test	Yes	Yes	Yes
Fixture Test	Yes	Yes	Yes
TDR	Yes	Yes	Yes
Ionics	Yes	Yes	Yes
CMI XRF	Yes	Yes	Yes