

Manufacturing Capability Overview

Prepared for equipment and process partner discussions · August 2026

This document summarizes the board specification range from our internal offering scope, so that equipment and process discussions can be scoped against what the plant is being designed to build.

Base Materials

Material	Detail
FR4, standard and mid Tg	Tg 130 to 160 °C. Mid Tg is the default house material.
FR4, high Tg	Tg 170 to 180 °C, Td ≥ 340 °C. Required for 8L and above, thick stacks and automotive.
FR4, halogen free	Mid Tg and high Tg variants.
FR4, CAF resistant	High Tg grade with a published minimum hole to hole spacing.
CEM3	Cost sensitive, double sided only.
Aluminum IMS (metal core)	Single layer. Dielectric conductivity up to 3.0 W/mK. Base 1.0, 1.5, 2.0 mm. Foil 1 and 2 oz.

Layer Count and Finished Thickness

Finished thickness	1L	2L	4L	6L	8L	10L	12L
0.4 mm							
0.6 mm							
0.8 mm	✓	✓	✓	✓			
1.0 mm	✓	✓	✓	✓	✓		
1.2 mm	✓	✓	✓	✓	✓		
1.6 mm	✓	✓	✓	✓	✓	✓	✓
2.0 mm	✓	✓	✓	✓	✓	✓	✓
2.4 mm	✓	✓	✓	✓	✓	✓	✓
3.0 to 3.2 mm	✓	✓	✓	✓	✓	✓	✓

Board and Panel Size

Parameter	Capability required
Maximum board / panel dimension	480 x 610 mm on any axis
Minimum board size	3 x 3 mm, supplied in array

Copper Weight, Line and Space

Copper weight	Minimum line / space
0.5 oz (18 μm), 1 oz (35 μm), 1.5 oz (53 μm), 2 oz (70 μm)	4 / 4 mil
3 oz (105 μm)	6 / 6 mil
4 oz (140 μm)	8 / 8 mil

Holes and Vias

Parameter	Capability required
Minimum drilled via diameter	0.2 mm

Parameter	Capability required
Minimum finished via diameter	0.10 mm
Maximum drilled diameter	9.00 mm
Maximum aspect ratio (thickness ÷ drill)	12 : 1
Minimum annular ring	4 / 4 mil
Minimum hole wall to hole wall	0.18 mm
Minimum hole to inner layer trace	8 mil
Plated hole tolerance	± 0.05 mm
Non plated hole tolerance	± 0.04 mm

Surface Finish

Finish
HASL, tin lead and lead free
ENIG
OSP
Immersion tin
Hard gold edge fingers, 30° or 45° bevel
Carbon ink contacts
Immersion silver

Solder Mask, Legend and Mechanical Features

Mask Color	Glossy	Matte
Green, Black, White, Blue	✓	✓
Red, Yellow, Purple	✓	

Parameter	Capability required
Legend color	White, Black
Minimum legend line width	75 µm
Minimum legend character height	1 mm
Mask defined pads	✓
Peelable Mask	✓
Data Code, lot number, 2D data matrix marking, QR code marking	✓

Testing, Inspection and Acceptance

Item	Offering
Electrical test	✓
Four wire Kelvin test	✓
High potential (HiPot) test	✓
Automated optical inspection	✓
X ray layer registration	✓
Microsection analysis	✓
Acceptance standard	IPC A 600, IPC 6012 Class 2; and IPC 6012 Class 3