

Sunshine Global Circuits is a premier Printed Circuit Board manufacturer. We provide high mix and high tech PCB's with reliable service & quality to leading electronic companies worldwide.

Range of technologies & services:

- Quick Turn Prototypes (5-10 days)
- Production Volumes (4 weeks Std)
- 2-50L Rigid PCB's
- Rigid-Flex and Flexible PCB's
- RF Microwave PCB's
- Heavy Copper PCB's
- HDI, Cu-Filled, Stacked Microvias
- Semiconductor Test Boards (ATE)
- High Speed Backplanes, Backdrill
- Low Dk/Df, Rogers, PTFE, Polyimide
- Mini-LED and Substrate-Like PCB's
- Blind/Buried Vias, Via-in-Pad (POFV)
- Hybrids, Cavities, Heatsinks
- Thermal Management PCB's
- FAE Tech Support for DFM/Stackups
- Same-day Quoting in North America
- VMI and Local Stocking Solutions

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Your Trusted Global Partner
for Printed Circuit Boards

Sunshine PCB Capabilities and Technologies



PCB Technologies

	Sunshine China	Sunshine Malaysia
Rigid FR4 PCB	Y	Y
High Speed Low Loss PCB	Y	Y
RF Microwave PCB	Y	Y
Hybrids & Mixed Dielectrics	Y	Y
HDI (Laser Drilled Microvias)	Y	In Dev.
Flex PCB	Y	N
Rigid-Flex PCB	Y	N
Metal Backed PCB	Y	N
Impedance Control	Y	Y
Non-Conductive Via Fill (POFV)	Y	Y
Conductive Hole Fill	Y	In Dev.
Sequential Lamination	Y	Y
Buried and Blind Vias	Y	Y
Buried Components	Y	N
Embedded Copper Coins	Y	N
Substrate Like PCB	Y	N
ATE	Y	N

Surface Finishes

	Sunshine China	Sunshine Malaysia
ENIG	Y	Y
LF HASL	Y	Y
Leaded HASL	Y	N
OSP	Y	Y
Immersion Silver	Y	Y
Immersion Tin	Y	N
Hard Gold / Gold Fingers	Y	Y
Wirebondable Soft Gold	Y	Y
ENEPIG	Y	N
Carbon Ink	Y	Y

Available Materials

We offer a wide range of materials
 FR-4, Halogen Free FR4, High Performance Low Loss, Ultra Low Loss
 BT Epoxy, Rigid Polyimide, PTFE, Ceramic, Metal Back
Please contact us for technical support when choosing materials.

Standard Features

	Sunshine China	Sunshine Malaysia
Maximum Layer Count	50	16
Maximum Panel Size	46"x28"	18"x24"
Outer Layer Trace/Spacing (1/3 oz base)	0.003"/0.003" [76µm/76µm]	0.004"/0.004" [100µm/100µm]
Inner Layer Trace/Spacing (H oz)	0.0025"/0.0025" [64µm/64µm]	0.003"/0.003" [80µm/80µm]
Maximum PCB Thickness	0.300"[7.6mm]	0.118"[3.0mm]
Minimum PCB Thickness	0.005"[0.13mm]	0.010"[0.25mm]
Minimum Mechanical Drill Size	0.006"[0.15mm]	0.008"[0.20mm]
Maximum Aspect Ratio	25 to 1	12 to 1
Maximum Copper Weight	10 oz	6 oz
Solder Mask Registration	± 0.002"[50µm]	± 0.002"[50µm]
Minimum Solder Mask Dam	0.003"[76µm]	0.003"[76µm]
Dimensional Tolerance (routed)	± 0.003"[76µm]	± 0.004"[100µm]

HDI Features (Sunshine China)

Minimum Microvia Hole Size	0.003"[75µm]
Capture Pad Size	0.009"[0.22mm]
Maximum Aspect Ratio	1 to 1
Stacked Microvias	Y
Copper Filled Microvias	Y
Buried Filled Vias	Y
Maximum No. of Buildup Layers	5+N+5

ATE Features (Sunshine China)

Maximum Layer Count	70
Maximum Panel Size	26"x30"
Maximum PCB Size	22.5" x 26.6" [571mm x 676mm]
Maximum Board Thickness	0.256"[6.5mm]
Maximum PCB Aspect Ratio	42 to 1
Minimum BGA Pitch	0.35 mm
Flatness at DUT area	50 µm
Overall Flatness	200 µm

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Flex PCB Features (Sunshine China)

Maximum Layer Count	6
Maximum Board Size	220mm x 520mm
Minimum Board Size	15mm x 15mm
Trace/Spacing (1/3 oz base)	0.003"/0.003" [76µm/76µm]
Minimum PI Thickness	0.001"[25µm]
Maximum PI Thickness	0.004"[100µm]
Minimum PCB Thickness	0.004"[0.10mm]
Maximum PCB Thickness	0.020"[0.50mm]
Minimum Mechanical Drill Size	0.006"[0.15mm]
Maximum Copper Weight	2 oz
Coverlay Registration Tolerance	± 0.004"[100µm]
Minimum Coverlay Web	0.004"[100µm]
Stiffener	Polyimide, FR4, Stainless Steel, Aluminum

Rigid-Flex PCB Features (Sunshine China)

Maximum Layer Count	28
Maximum Board Size	460mm x 500mm
Minimum Board Size	20mm x 20mm
Minimum Width for Flex Area	3mm
Trace/Spacing (1/3 oz base for IL)	0.003"/0.003" [76µm/76µm]
Trace/Spacing (1/3 oz base for OL)	0.0035"/0.0035" [89µm/89µm]
Maximum Flex Cores (Air Gap)	6
Maximum Flex Cores (no Air Gap)	2
Flex on Outer Layers	Yes
Minimum Hole to R-F Transition Zone	0.024"[0.61 mm]
Minimum Copper to R-F Transition Zone	0.020"[0.5 mm]
Coverlay Registration Tolerance	± 0.006"[150µm]
Minimum Coverlay Web	0.004"[100µm]
Maximum HDI Buildup Layers	3+N+3

Quality and Environmental Certifications

IPC-A-600, IPC-6012, IPC-6013, Class II and Class III
 UL 94V-0 E229342 (Rigid), E503853 (Flexible)
 ISO-9001:2015, ISO-13485:2016, IATF-16949:2016, AS9100 (I2)
 ISO-14001, ISO-14067, ISO-45001, IECQ QC-080000