



Shenzhen Lonstar Circuit Co., Ltd.

PCB Manufacturing		
No.	Item	Technical Capability
1	Material (材料)	FR-4, CEM1, CEM3, High Tg, High CTI, Halogen free, Aluminum, FPC
2	Layer No. (层数)	1-32L
3	Surface finish (表面工艺)	HAL, HASL Leadfree, ENIG, Chem Tin, OSP, Gold Finger, Immersion Silver
4	Min. Core thickness (最小芯板厚度)	4mil/0.1mm
5	Prepreg type (PP型号)	1080, 2116, 7628, 3313, 2165, 1500.
6	Max board size (最大板子尺寸)	22.8X47.2inch/580X1200mm
7	Copper thickness (铜厚)	Min. base copper 1/4Oz
		Max. base copper 6Oz
8	Min. board thickness (最小板厚)	2- Layer 0.25mm/10mil
		4-Layer 0.35mm/14mil
		6-layer 0.65mm/26mil
		8-Layer 1.0mm/40mil
		10-Layer 1.3mm/51mil
		12-Layer 1.6mm/63mil
		14-Layer 1.8mm/71mil
		16-Layer 2.0mm/79mil
18-Layer 2.16mm/85mil		
9	AOI(Automatic Optical Inspection) (自动光学检测)	Max.table size: 685X685mm
		Max.inspect size: 620X620mm
		Max. thickness: 3.20mm(126mil)
		Min. thickness: 0.10mm(4mil)-core
		Min. width/gap: 3mil/3mil
10	Board thickness Tolerance (板厚公差)	±0.10mm(4/6layers)
		±0.13mm(8/10layers)
		±0.15mm(12/14/16layers)
11	Max.board thickness (最大板厚)	6.0mm/236mil
12	Solder mask openings(阻焊开窗)	2mil(normal), 1mil(advanced)



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13	Solder maks bridge(阻焊开窗)	$\geq 4\text{mil}$ (green and yellow inki), $\geq 5\text{mil}$ (white, black, purple...)
14	Min.line width/space (最小线宽/线距)	3/3mil
15	Min hole size (最小孔径)	4mil/0.1mm
16	PTH wall thickness (PTH孔铜厚度)	$\geq 25\mu\text{m}$
17	Max. aspect ratio (最大纵横比)	12:01
18	PTH dia. Tolerance (PTH孔径公差)	$\pm 0.075\text{mm}/3\text{mil}$ (Standard), $\pm 0.05\text{mm}/2\text{mil}$ (Advanced)
19	NPTH dia. Tolerance (NPTH孔径公差)	$\pm 0.05\text{mm}/2\text{mil}$ (On laminate area)
		$\pm 0.03\text{mm}$ (On ground area)
20	Hole location Tolerance (孔位置公差)	± 0.075 (Standard) $\pm 0.05\text{mm}$ (Advanced)
		± 0.13 (2nd drilled hole to 1st drilled hole location (mm))
21	Slot size tolerance (槽尺寸公差)	$\pm 0.075\text{mm}$ (board thickness $\leq 1.0\text{mm}$)
		$\pm 0.10\text{mm}$ (board thickness $> 1.00\text{mm}$)
22	V-CUT Remain thickness tolerance (V-CUT余厚公差)	$\pm 0.10\text{mm}$ (Standard), $\pm 0.076\text{mm}$ (Advanced)
23	Peelable mask Thickness (可剥离胶厚度)	$\geq 8\text{mil}$ (0.2mm)
24	Insulation Resistance (绝缘电阻)	$> 10^{12}\Omega$
25	Through hole Resistance (通孔电阻)	$< 300\Omega$
26	Current breakdown (击穿电流)	10A
27	Peel Strength (剥离强度)	1.4N/mm
28	S/M Abrasion (阻焊硬度)	$> 6\text{H}$
29	Thermal stress (热应力)	288 $^{\circ}\text{C}$ 20Sec
30	Test Voltage (测试电压)	20-300V
31	Min.blind/burried via(最小盲埋孔)	4mil/0.1mm
32	Impedance control (阻抗)	(50 Ω -100 Ω) $\pm 10\%$ (Standard)、(50 Ω -100 Ω) $\pm 7\%$ (Advanced)



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PCBA Manufacturing		
No.	Item	Technical Capability
1	Testing Machine(SMT 设备)	X-ray Non-destructive testing Machine, First piece Inspection Device, AOI Automatic Optical Inspection Machine, ICT detector, BGA Work station
2	SMT Speed(SMT 速度)	0.036S/pcs
3	DIP plug Speed(DIP 速度)	200000pcs/Day
4	DIP soldering Speed(DIP 速度)	400000pcs/Day
5	DIP Production Speed(DIP生产速度)	50000pcs/Day
6	PCB Layer(可贴的层数)	Up to 32L
7	Material (材料)	FR-4, CEM1, CEM3, High Tg, High CTI, Halogen free, Aluminum, FPC
8	Max dimension(最大尺寸)	610*1100mm
9	Board thickness(板厚范围)	0.4-6.0mm
10	Min. BGA size(最小BGA尺寸)	0.2mm
11	Min. SMT Component size (最小贴片尺寸)	"0201
12	Max. Height of SMT components (最大贴片高度)	25.4mm
13	BGA/CSP Min. space , Ball diameter	0.30mm, 0.15mm
14	SPI Min. BGA space(最小锡球间距)	100µm
15	3D X-Ray Magnification multiple(X-ray 放大倍数)	Geometric magnification 2000; The system magnification is 12000
16	SMT Precision(贴片精度)	±22Um@6,cpk≥2.0
17	Copper thickness (铜厚)	Min. base copper 1/4Oz
		Max. base copper 6Oz
18	Min. board thickness (最小板厚)	2- Layer 0.25mm/10mil
		4-Layer 0.35mm/14mil
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		Max.inspect size: 620X620mm
		Max. thickness: 3.20mm(126mil)
		Min. thickness: 0.10mm(4mil)-core
		Min. width/gap: 3mil/3mil
20	Board thickness Tolerance (板厚公差)	±0.10mm(4/6layers)
		±0.13mm(8/10layers)
		±0.15mm(12/14/16layers)
21	Solder mask color(阻焊颜色)	Green, Blue, Black, Red, White, Yellow, Grey, Pink, Orange
22	Min. Solder mask width(最小阻焊宽度)	0.075mm
23	Min.line width/space (最小线宽/线距)	3/3mil
24	Min hole size (最小孔径)	2mil/0.05mm
25	Max. aspect ratio (最大纵横比)	12:01
26	V-CUT Remain thickness tolerance (V-CUT余厚公差)	±0.10mm(Standard), ±0.076mm(Advanced)
27	Current breakdown (击穿电流)	10A
28	Peel Strength (剥离强度)	1.4N/mm
29	S/M Abrasion (阻焊硬度)	>6H