Technical Capability

项目 Items		量产 Mass	样品 Sample
层数 Layer count		18	22
板厚 Board Thickness		0.1mm~1.6mm	0.08mm~1.6mm
板厚公差 Board Thickness		± 10%	± 8%
最小芯板厚度 Min Core Thickness		2mil	2mil
最小PP厚度 Min PP Thickness		3mil	2mil
最大交付尺寸 Max Delivery Panel		20”x 24”	21”x 24”
最大铜厚(内层/外层) Max Copper Thickness Inner/Outer		2oz/2oz	3oz/3oz
线宽/线距 Width/Space	内层 Inner Layer	30um/30um (Hoz)	20um/20um (Hoz)
	外层 Outer Layer	30um/30um(Hoz)	20um/20um (Hoz)
最小通孔孔径 Min Through Hole Diameter		0.10mm	0.10mm
最大通孔孔径 Max Through Hole Diameter		6.3mm	6.5mm
孔位精度公差 Hole Position Tolerance		±3mil	±2mil
PTH孔径公差 PTH Diameter Tolerance		±3mil	±2mil
压接孔径公差 Press Fit Hole Tolerance		±2mil	±2mil
NPTH孔径公差 NPTH Diameter Tolerance		±2mil	+2/-0mil
孔到铜最小距离(Hoz or 1oz) Min Distance Between Hole and Circuit		6mil	5mil
深镀能力 Deep Plating Capability		10:01	12:01
塞孔孔径比(POFV) Hole Fill Aperture Ratio		8:01	10:01
绿油桥间距 Distance Between SM Bridge		3mil	2mil
绿油桥宽度 Width of SM Bridge		3.5mil	3mil
背钻 Back Drill		Yes (Via >= 0.35mm)	Yes (Via = 0.30mm)

Technical Capability

项目 Items	量产 Mass	样品 Sample
板边电镀 Edge Plating	yes	yes
外形公差（L）Contour Tolerance	(+/-0.075mm)	(+/-0.05mm)
金手指宽度公差（L2) Width Tolerance for Gold Finger	(+/-0.03mm)	(+/-0.025mm)
金手指分段最小间距（L3) Min Distance Between Gold Finger	5.0mil	4.0mil
图形对位精度（Top&Bottom面) Alignment Accuracy for layers	(+/-1mil)	(+/-0.8mil)
阻抗公差 Impedance Tolerance（≥50ohm）	±8%	±5%
阻抗公差 Impedance Tolerance（ ≤50ohm）	±5ohm	±3.5ohm
翘曲(不对称结构) Bow and Twist(Dissymmetry)	≤1%	≤0.5%
表涂 （自有） Surface Finish （In House）	电软金，电硬金，电镍，电银，电镍银金，沉镍金，沉镍钯金，OSP Soft Gold， Hard Gold， Electroplate Nickel, Electroplate Silver, ENSG , ENIG, NiPdAu, OSP	
板材 CCL	FR4	ShengYi: S1000-H/S1000-2 ITEQ: IT158/IT150G/IT180A/IT180I NanYa: NPG-150N/NP155F/NY2150/NP175F/NPG-170N/NPG-171 EMC:EM827/EM825/EM370(5)/EM285 TUC:TU-768/TU-747HF/TU-862/TU-872 Panasonic: R1755C/R1755V Isola: 370HR
	软板材料 Flex Material	Dupont： AP series Panasonic： R-F 775/R-F 777 ShengYi: SF202/SF305 ITEQ:IF-2LD GOLDING:GHD102550BJB-1 Taiflex: 2UPDR1003JA/2FPDR1003JA/2FPDE0803MW/H2FPDR1003JA Nippon Steel: MB 092509

High Speed Material Experience

JARNISTECH PCB & ASSEMBLY

Df@10GHz

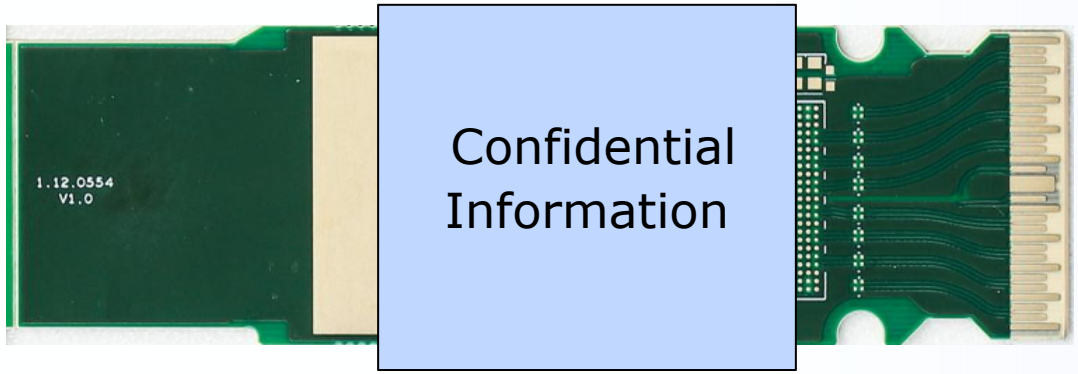
蓝色字“无卤”
Blue word “HF”

	2022			2023				2024
Ultra Low loss 0.004				M7(GE)	DS-7409DJN2	TU933E		T4
				DS-7409DVN	Tachyon 100G	IT998G		M8
Very Low loss 0.008	TU883/SP	Synamic6		DS-7409DV	EM-528	M6K		
	M6G/N	EM-890/K	IT968/SE	I-TeraMT40	MW1000/2000/3000/4000			
Low loss 0.012	EM-526	EM-888	H180HF	EM-888(S)	TU-863+	EM-888K	FR408HR	
	S7439	M4/M4S	IT150DA	IT-958G	IT200LK	TU-872系列	I-Speed	
Mid loss 0.020	TU862 HF	IT170GRA1	EM370(D)	EM828G	Megtron2		IT150GS	
	H175HF	IT170GT	S7038	IT200LK	TU862S/T	IS415	FR408	
Std loss	EM370(5)	EM285	TU-747HF	IT150G	NPG-171	NPG-170N	370HR	
	IT-180A	TU-768	S1000-2	R1755C	R1755V	IT-180I	NP175F	
	S1000/H	IT158	EM-825	EM-827	NY2150	NP155F	NPG-150N	

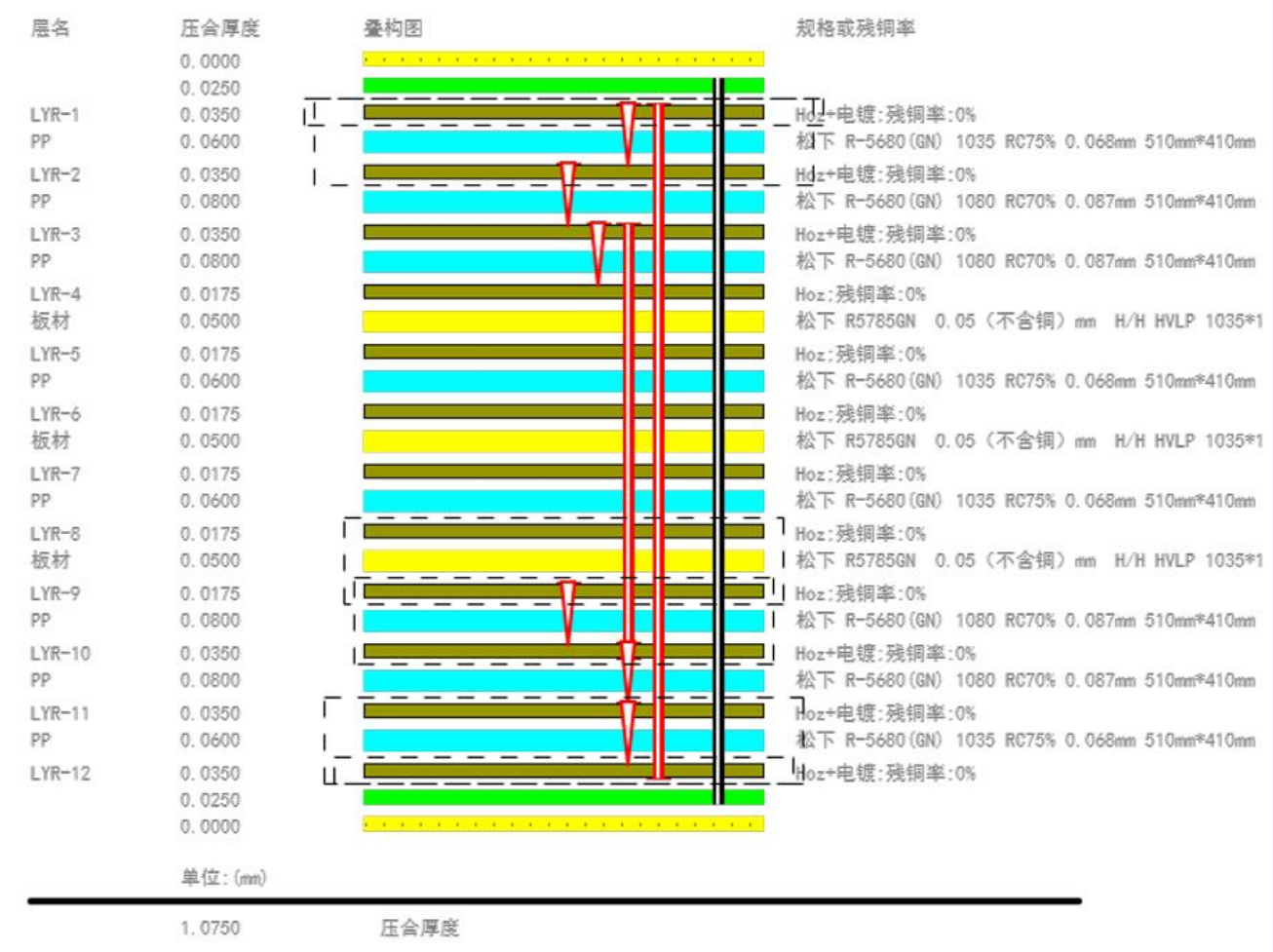
Technical Roadmap

No.	项目 Item	技术指标 Technology	2023	2024	2025
1	产品结构 Construction	结构类型 Construction	样品 Sample：4+2+4 批量 Mass: 3+2+3	样品 Sample：5+2+5/6+2+6 批量 Mass: 4+2+4	样品 Sample：7+2+7/8+2+8 批量 Mass: 5+2+5
		可生产层数 Layer Count	样品 Sample：10L 批量 Mass：4~8L	样品 Sample：14L 批量 Mass：4~12L	样品 Sample：18L 批量 Mass：4~14L
2	HDI	盲孔阶数 Step	三阶 3 steps	四阶 4 steps	五阶 5 steps
		X/盲孔直径 Blind Hole Diameter	75um	60um	50um
		盲孔偏位 Blind Hole Alignment Accuracy	≤30um	≤25um	≤20um
		盲孔凹陷 Blind Hole Sinking	≤10um	≤8um	≤5um
3	电镀 Plating	镀铜均匀性 Uniformity	镀层 Basic Copper≤30um：±4um	镀层 Basic Copper≤30um：±4um	镀层 Basic Copper≤30um：±3um
		深镀能力 Deep Plating	厚径比 Aspect Ratio 8：1 TP=75%	厚径比 Aspect Ratio 8：1 TP=75%	厚径比 Aspect Ratio 8：1时TP=90%
4	线路 Circuit	线宽/线距 Width/Space	0.05/0.05mm	0.04/0.04mm	0.035/0.035mm
		线宽公差 Tolerance	±0.015mm	±0.015mm	±0.01mm
		顶/底层错位 Alignment Accuracy	10um	10um	8um
5	阻焊 Solder Mask	对位能力 Alignment Accuracy	15um	15um	15um
		阻焊桥宽度 Width of SM Bridge	3mil	3mil	2mil
		铜面阻焊开窗 SM Open on Copper	100±10um	90±10um	80±10um
		表面平整度 Flatness	≤25um	≤25um	≤25um
6	外型 Outline	插拔手指到边公差 Tolerance Between Gold Finger to Edge	钻槽 Drilling Slot±0.05 锣边 Routing±0.075	钻槽 Drilling Slot±0.05 锣边 Routing±0.075	Drilling Slot 钻槽±0.05 锣边 Routing±0.075
		板面翘曲度 Bow and Twist	≤0.75%	≤0.75%	≤0.5%
7	阻抗 Impedance	阻抗线宽公差 Width Tolerance	±0.015mm	±0.015mm	±0.01mm
		阻抗值公差 Impedance Tolerance	±7%	±7%	±5%

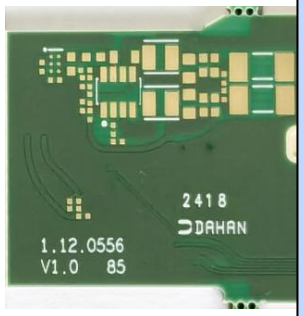
Products Show



Type	PCB Specification
Layer	12L (3 steps HDI)
Material	M7 (R5785)
Board Thickness	1.0mm±10%
Surface Finish	ENEPIG
Special Design	Outline tolerance ±0.05mm
impedance	+/-8%
Application	Optical Module



Products Show



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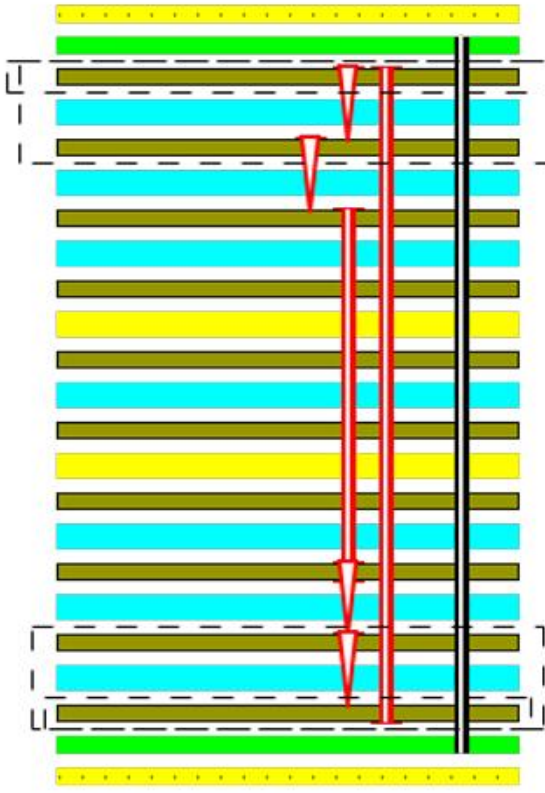

层名	压合厚度	叠构图	规格或残铜率
	0.0000		
	0.0200		
LYR-1	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-2	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-3	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-4	0.0350		Hoz+电镀:残铜率:0%
板材	0.0500		松下 R5785GN 0.05（不含铜）mm 1/1 HVLP
LYR-5	0.0350		Hoz+电镀:残铜率:0%
PP	0.0820		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-6	0.0350		Hoz+电镀:残铜率:0%
板材	0.0500		松下 R5785GN 0.05（不含铜）mm 1/1 HVLP
LYR-7	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-8	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-9	0.0350		Hoz+电镀:残铜率:0%
PP	0.0720		台光 EM-89BK 1078 RC67% 0.082mm 510*410mm
LYR-10	0.0350		Hoz+电镀:残铜率:0%
	0.0200		
	0.0000		

单位:(mm)

1.0040 压合厚度

Type	PCB Specification
Layer	10L（2阶HDI）
Material	EM890K
Board Thickness	1.0mm±10%
Surface Finish	ENEPIG
Special Design	Outline tolerance ±0.05mm
impedance	+/-8%
Application	Optical Module

Products Show

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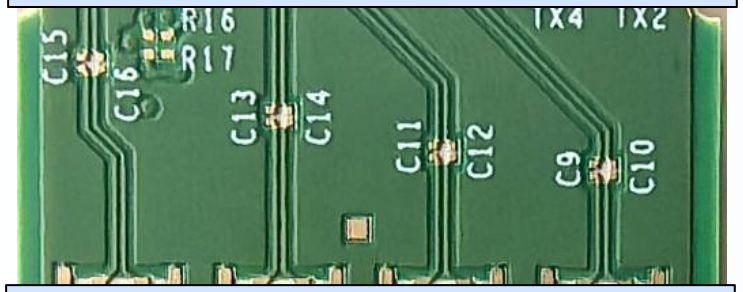

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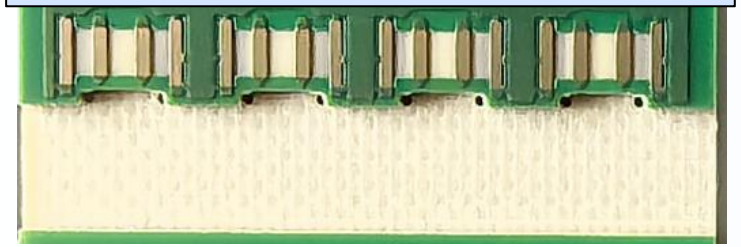
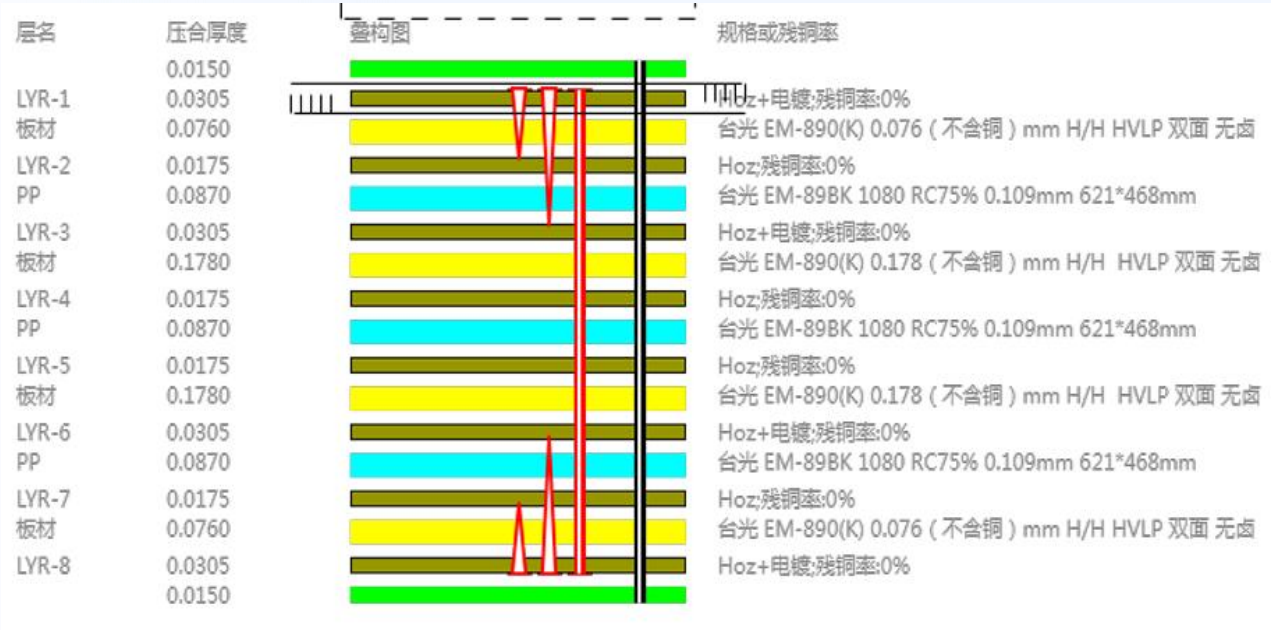
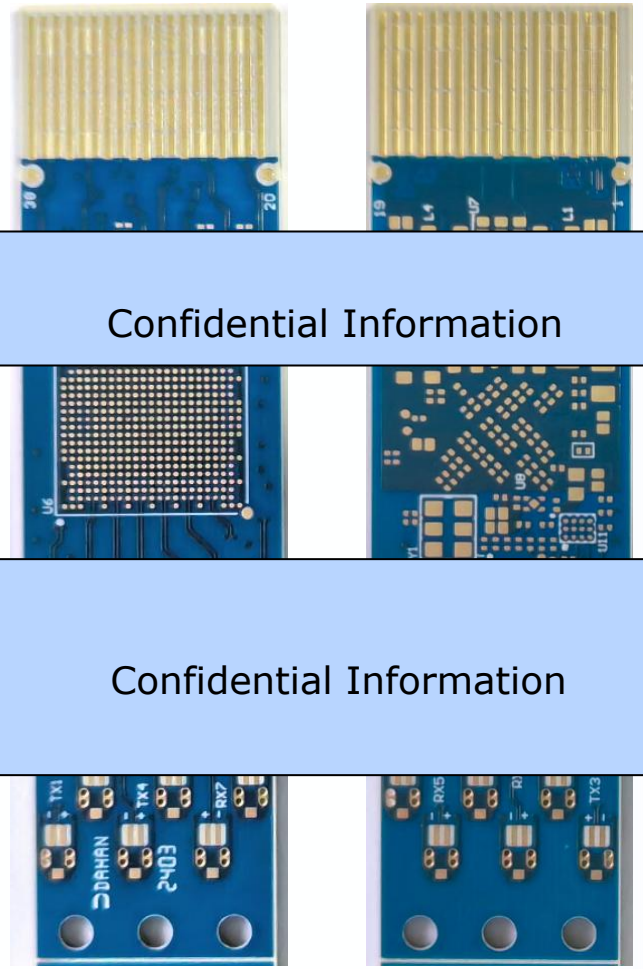




Type	PCB Specification
Layer	8L
Material	890K
Board Thickness	1.0mm±10%
Surface Finish	ENIG + G/F
Special Design	Outline tolerance ±0.05mm
impedance	+/-8%
Application	Optical Module

Products Show



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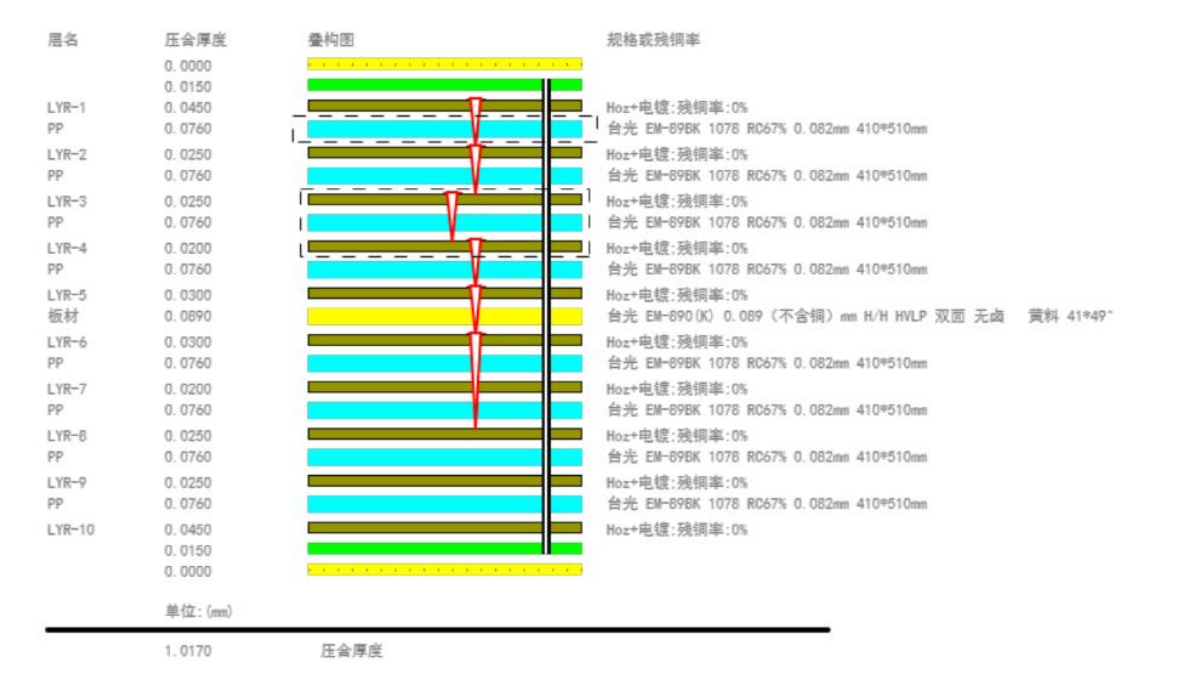
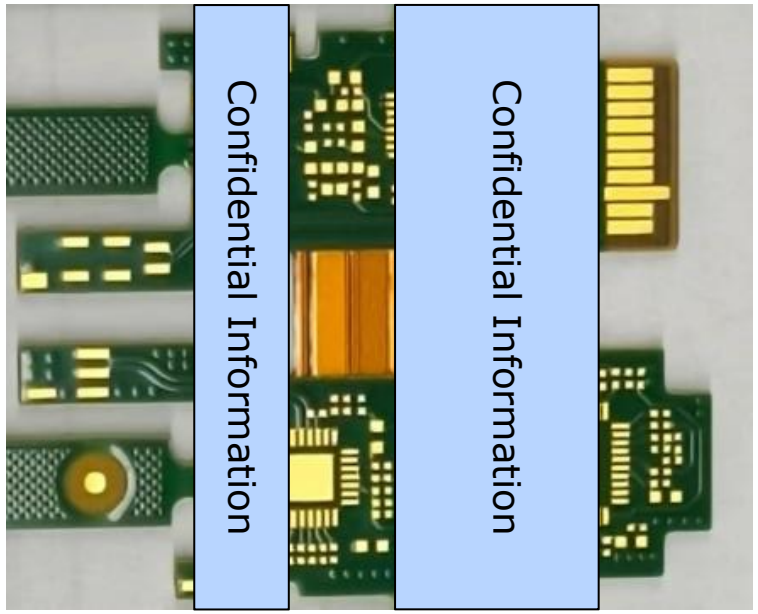


Type	PCB Specification
Layer	10L
Material	EM-890K
Board Thickness	1.0mm±10%
Surface Finish	ENIG+G/F
Special Design	HDI ELC
impedance	+/-7%
Application	Optical Module

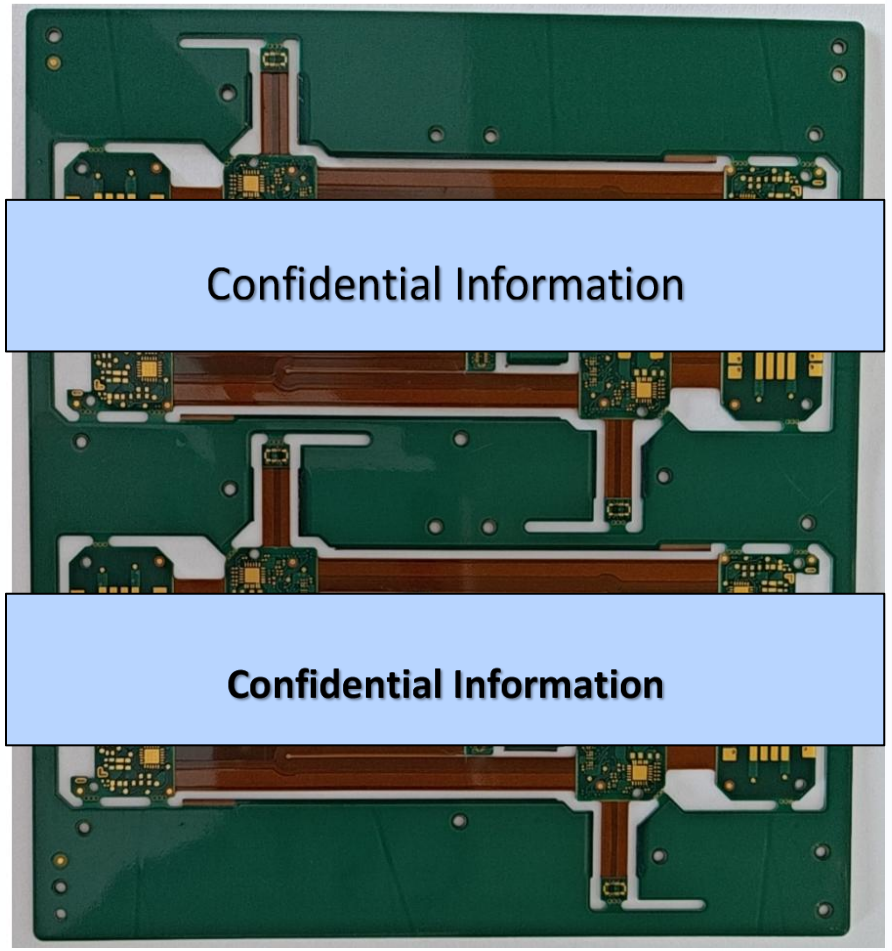
Products Show



Type	PCB Specification
Layer	10L Rigid Flex PCB
Material	Flex: Panasonic R-F775 Rigid: TUC TU-863+
Board Thickness	1.0mm±10%
Surface Finish	ENEPIG
Special Design	HDI R-F ELC
impedance	+/-7%
Application	Optical Module

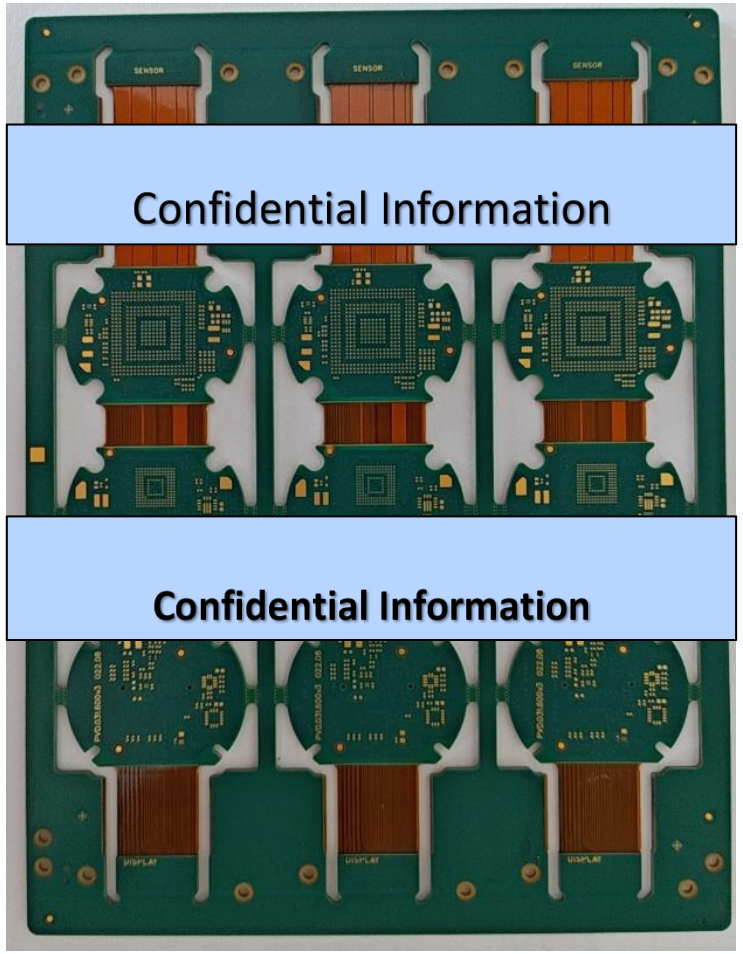
Layer Descriptions 图层描述	Material 材料	DK	Raw Material thickness(um) 原材料厚度	Finished Thickness (After compressed) type1	Finished Thickness (After compressed) type2
Top side Solder mask	Green		25	25	
L1 Copper	Copper(RTF)+Plating		12	35	
L1-2 PP	TU-863P+ 1078 RC63% 0.076mm	3.73	76	66	
L2 Copper	Copper+Plating		12	35	
L2-3 PP	TU-863P+ 1078 RC63% 0.076mm	3.73	76	66	
L3-4CORE	Copper		18	35	
	TU-863P+ 2116 RC51%	4.11	114	114	
	Copper		18	15	
L4-5 PP	TU-863P+ 1067 RC64% 0.051mm	3.7	51	40	
L4-5 PP	TU-863P+ 1067 RC64% 0.051mm	3.7	51	40	
生益 SF305C 1025NA250A L PI:25um AD:25um	Coverlay		25		25
	Coverlay Adhesive		25		25
L5-6CORE	Copper		18	18	18
	R-F775 22K5 18-50-18 (RA)	3.20	50	50	50
	Copper		18	18	18
生益 SF305C 1025NA250A L PI:25um AD:25um	Coverlay Adhesive		25		25
	Coverlay		25		25
L6-7 PP	TU-863P+ 1067 RC64% 0.051mm	3.7	51	40	
L6-7 PP	TU-863P+ 1067 RC64% 0.051mm	3.7	51	40	
L7-8CORE	Copper		18	15	
	TU-863P+ 2116 RC51%	4.11	114	114	
	Copper		18	35	
L8-9 PP	TU-863P+ 1078 RC63% 0.076mm	3.73	76	66	
L9 Copper	Copper+Plating		12	35	
L9-10 PP	TU-863P+ 1078 RC63% 0.076mm	3.73	76	66	
L10 Copper	Copper(RTF)+Plating		12	35	
Bottom side Solder mask	Green		25	25	
理论堆叠厚度	Tolal After Press Thickness (um)		1092	1028	186
客户要求厚度	Spec (um)			1000	190

Products Show



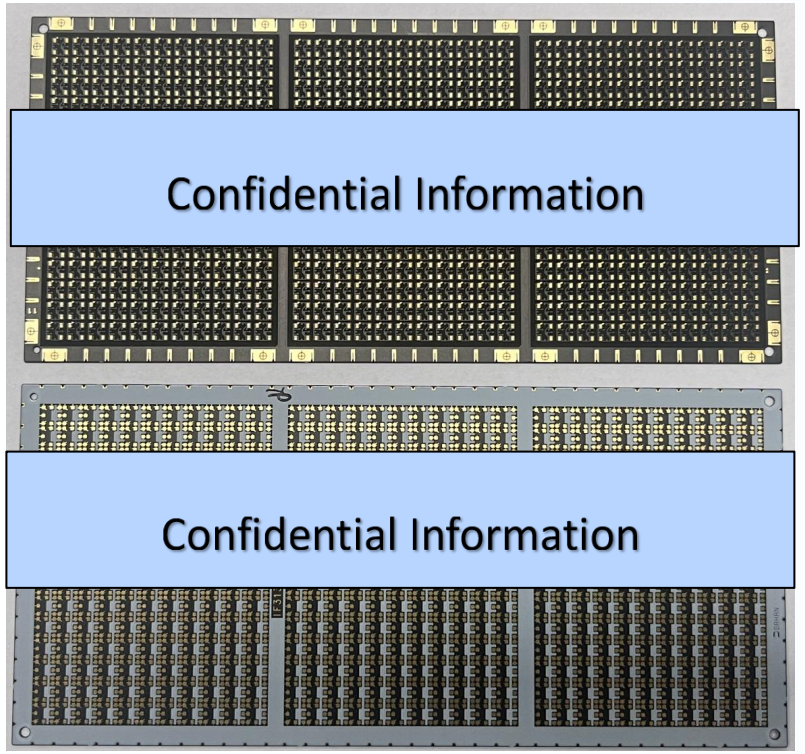
Type	PCB Specification
Layer	12L Rigid Flex PCB
Unit Size	146.5mm*31.29mm
Material	Flex: ShengYi SF202 Rigid: ShengYi S1170G
Board Thickness	1.31mm±10%
Surface Finish	ENIG
Special Design	Impedance control 90±9Ω Aspect ratio 8:1
Application	Medical

Products Show



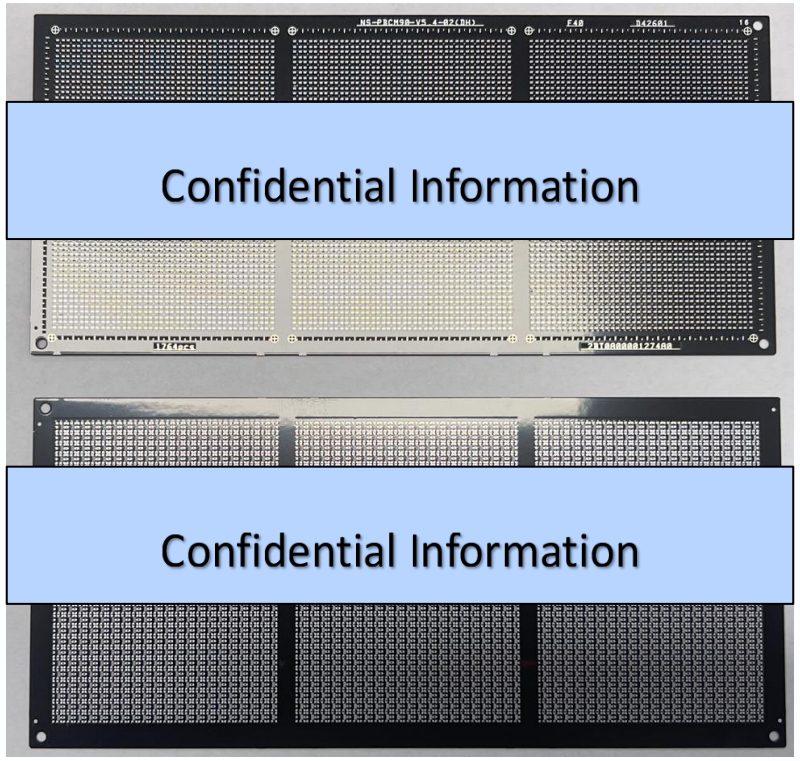
Type	PCB Specification
Layer	6L Rigid Flex PCB
Unit Size	139.48mm*39.07mm
Material	Flex: ShengYi SF202 Rigid: ShengYi S1170G
Board Thickness	0.8±0.1mm
Surface Finish	ENIG
Special Design	Aspect ratio 8:1
Application	Medical

Products Show



Type	PCB Specification
Layer	2L
Material	BT(Black)
Board Thickness	0.4mm
Surface Finish	Obverse side: ENIG Reverse side: Electroplate Nickel Gold
Special Design	Via fill: Copper plating Distance between PAD: 60um
Application	Mini LED

Products Show



Type	PCB Specification
Layer	2L
Material	BT(Black)
Board Thickness	0.2mm
Surface Finish	Electroplate Nickel Silver
Special Design	Solder mask via fill Distance between PAD: 50um Glossiness requirement: 30~50GU
Application	Mini LED

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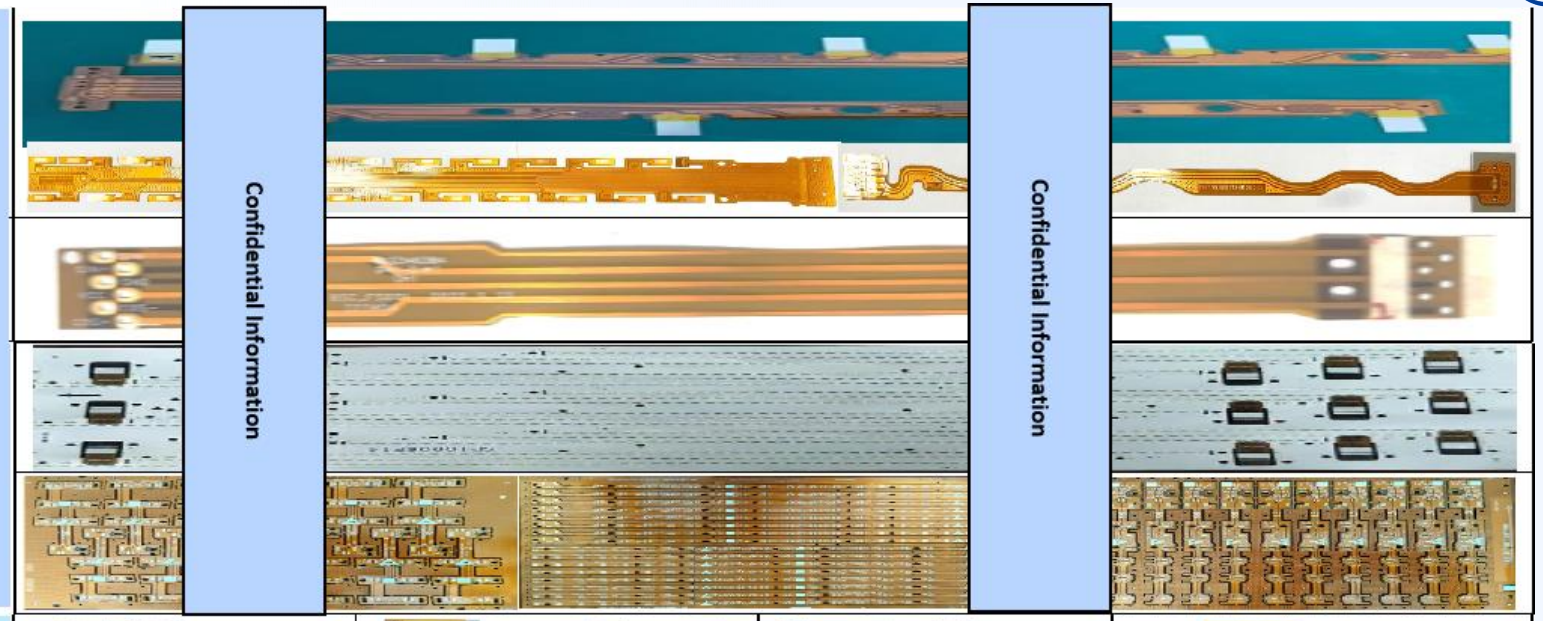
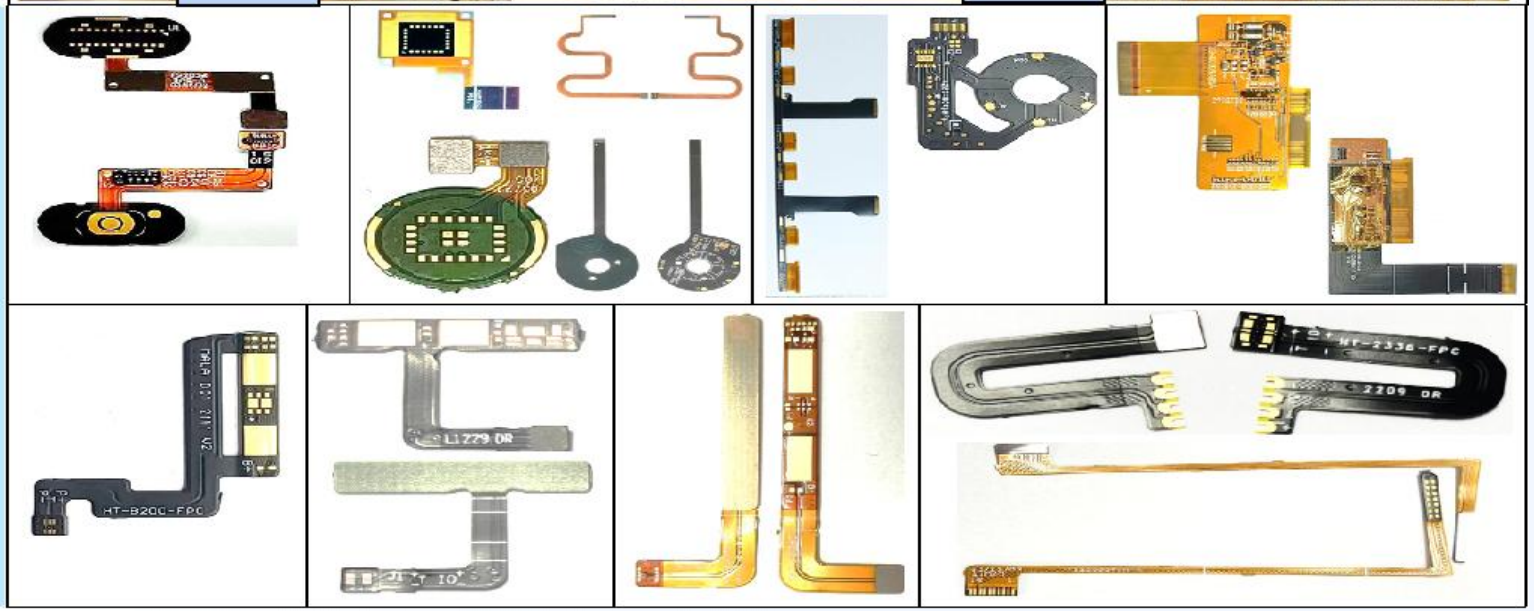
汽车
Automotive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Consumer Electronics