

连兴旺电子(深圳)有限公司

承认书

SPECIFICATIONS FOR APPROVAL

客户:

Customer: _____

客户料号:

Customer Part No: _____

公司料号:

Part No:

21053-S2000XXBSN00R

产品名称:

Description:

0.5Pitch无锁立贴正脚FFC 连接器

发行日期:

Issue Date: _____

客户签核 (Customer Approval) :

采购	品保	工程

内部签核 (Signature) :

核准	审核	制作
张旭明	蔡雍醇	谭泽沛

连兴旺电子(深圳)有限公司

LXWCONN ELECTRONICS (SHENZHEN) CO.,LTD

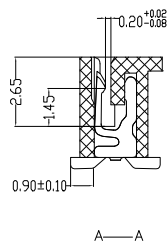
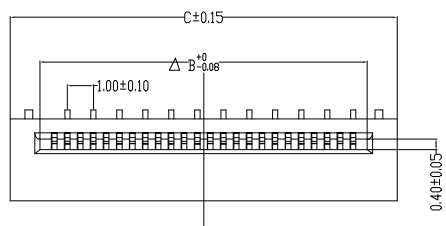
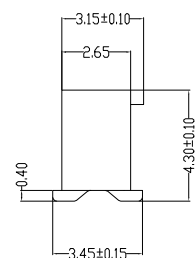
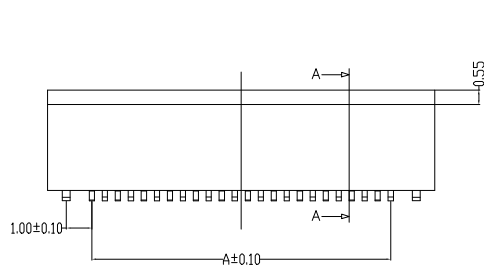
TEL: +86-0755 2369 8715

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ADD: 东莞市虎门镇新联社区高科一路 1 号钧益工业园 E 栋

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5	塑胶 LCP 材质 MSDS, RoHS 报告, UL 黄卡, 物性表	附件报告
6	磷铜 C5191 MSDS, RoHS 报告, SVHC 报告	附件报告
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8	电镀锡 MSDS, RoHS 报告, SVHC 报告	附件报告

更改记录				
序号	版本	内容	制作	批准
1	A0	初版发行		



技术参数 SPECIFICATIONS

间距 (Pitch) : 0.5

极数 (Poles) : 4 ~ 60

额定电压 (Voltage rating): 50V DC/AC

额定电流 (Current rating) :0.5A DC/AC

耐压值 (Withstand Voltage) : 500V

工作温度 (Working Temperature) : -25℃

 $\sim +85^{\circ}\text{C}$

绝缘电阻 (Insulation

Resistance) : $\geq 500\text{M } \Omega$

接触电阻 (Contact

resistance) $\leq 30 \text{ m } \Omega$

材料 Material

接触件 (Contact): 磷青铜 $t=0.2\text{mm}$ 镀亮锡(底层Ni

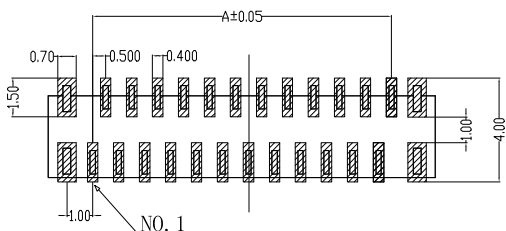
30~80 μ'' , 表层Sn 80~200 μ'')

焊片 (solder tab): 黄铜 $t=0.3\text{mm}$ 镀亮锡(底层Ni 30~80

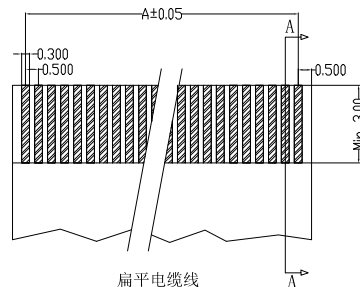
 u'' , 表层Sn 80~200 u'')

塑胶主体 (Housing) : LCP 耐热树脂 (UL94V-0) LCP

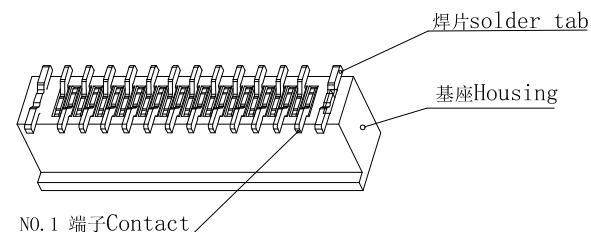
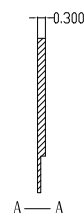
Heat resistance plastic (UL94V-0) 白色White



PCB LAYOUT



扁平电缆线



N0.1 端子Contact

CUSTOMER
DRAWING

GENERAL TOLERANCE	
.X	±0.25
.XX	±0.15
.XXX	±0.05
ANGLE ±1°	

SIZE	
A4	



DESIGN	Tan	2026.05.21
CHECKED	Tan	2026.05.21

APPROVAL	S
Tan	
2026.05.21	

连兴旺电子(深圳)有限公司
LXWCONN ELECTRONICS (SHENZHEN) CO., LTD

TITLE
0.5Pitch无锁立贴正脚FFC 连接器

PART NO.
21053-S2000XXBSN00R

SCALE	UNITS	REV.	SHEET
1:1	MM	A	1 OF 2

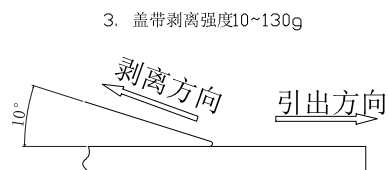
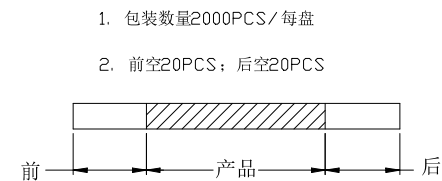
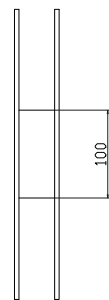
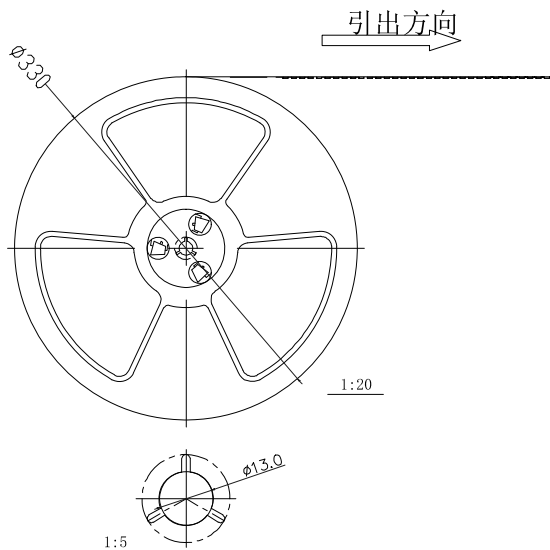
规 格 (单位: mm)			
孔位	A	B	C
4P	1.50	2.60	4.90
5P	2.00	3.10	5.40
6P	2.50	3.60	5.90
7P	3.00	4.10	6.40
8P	3.50	4.60	6.90
9P	4.00	5.10	7.40
10P	4.50	5.60	7.90
11P	5.00	6.10	8.40
12P	5.50	6.60	8.90
13P	6.00	7.10	9.40
14P	6.50	7.60	9.90
15P	7.00	8.10	10.40
16P	7.50	8.60	10.90
17P	8.00	9.10	11.40
18P	8.50	9.60	11.90
19P	9.00	10.10	12.40
20P	9.50	10.60	12.90

21P	10.00	11.10	13.40
22P	10.50	11.60	13.90
23P	11.00	12.10	14.40
24P	11.50	12.60	14.90
25P	12.00	13.10	15.40
26P	12.50	13.60	15.90
27P	13.00	14.10	16.40
28P	13.50	14.60	16.90
29P	14.00	15.10	17.40
30P	14.50	15.60	17.90
31P	15.00	16.10	18.40
32P	15.50	16.60	18.90
33P	16.00	17.10	19.40
34P	16.50	17.60	19.90
35P	17.00	18.10	20.40
36P	17.50	18.60	20.90
37P	18.00	19.10	21.40
38P	18.50	19.60	21.90
39P	19.00	20.10	22.40
40P	19.50	20.60	22.90

41P	20.00	21.10	23.40
42P	20.50	21.60	23.90
43P	21.00	22.10	24.40
44P	21.50	22.60	24.90
45P	22.00	23.10	25.40
46P	22.50	23.60	25.90
47P	23.00	24.10	26.40
48P	23.50	24.60	26.90
49P	24.00	25.10	27.40
50P	24.50	25.60	27.90
51P	25.00	26.10	28.40
52P	25.50	26.60	28.90
53P	26.00	27.10	29.40
54P	26.50	27.60	29.90
55P	27.00	28.10	30.40
56P	27.50	28.60	30.90
57P	28.00	29.10	31.40
58P	28.50	29.60	31.90
59P	29.00	30.10	32.40
60P	29.50	30.60	32.90

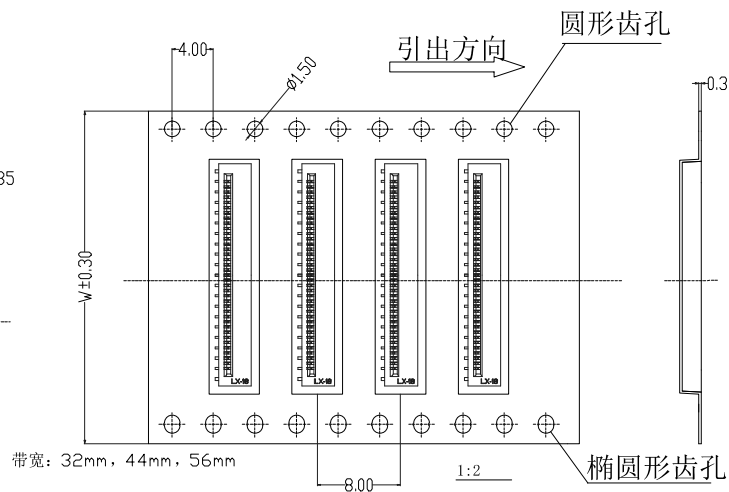
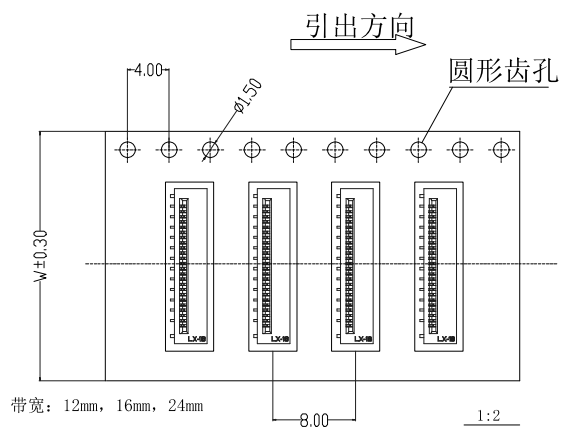
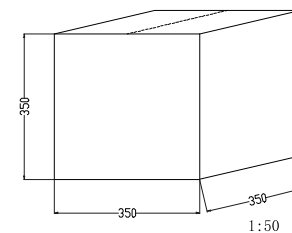
**RoHS
Compliant**
2013/95/EC





4. 材质:
载带: PS 聚苯乙烯
盖带: PET 聚对苯二甲酸乙二醇酯
透明薄膜 t=0.05mm
胶盘: PS 聚苯乙烯
蓝色纸箱: 双瓦楞

纸箱规格: 350mm*350mm*350mm (长*宽*高)



载带全尺寸符合:
EIA-481-D 标准要求

Pin位	带宽W	颜色	备注
4~8	16	雾透	
12~20	24	雾透	
15	24	黑色	
40	32	雾透	
45	44	雾透	

RoHS
Compliant
2013/95/EC



CUSTOMER DRAWING		 LXW connectivity 连兴旺电子(深圳)有限公司 LXWCONN ELECTRONICS (SHENZHEN) CO., LTD					
GENERAL TOLERANCE .X ±0.25 .XX ±0.15 .XXX ±0.05 ANGLE E±1°		DESIGN Tan 2026.05.21		TITLE 0.5Pitch无锁立贴正脚FFC 连接器			
		CHECKED Tan 2026.05.21		PART NO. 21053-S2000XXBSN00R			
SIZE A4		APPROVAL Tan 2026.05.21		SCALE 1:1	UNITS MM	REV. A	SHEET 2 OF 2

产品规格书

PRODUCT SPECIFICATION

1.适用范围 SCOPE

本规格书适用于 0.5-2-nPB 连接器系列.

This specification covers the 0.5-2-nPB connectors series.

2.外观尺寸 CONNECTOR DIMENSIONS

请参照图面 See attached drawings.

P.C.B LAYOUT 请参照图面 See attached drawings.

3.材质 MATERIAL

绝缘胶体 Housing: LCP

颜色 Color:本色 natural colour

耐燃等级(UL94V-0)Flammability Rating(UL94V-0).

端子 Terminal: 磷青铜 Phosphor Bronze.

焊片 Fitting Nail: 黄铜 Brass.

4. 等级 RATING

项目 ITEM	规格 SPECIFICATIONS
额定电压 (Voltage rating)	50V AC/DC
额定电流 (Current rating)	0.5A DC/AC
使用温度 Operating Temperature range	-25° C ~ +85° C
使用湿度 Operating humidity range	相对湿度 80%以下 Relative humidity 80% max.

5.性能 PERFORMANCE

5.1 电气特性 ELECTRICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIREMENT
接触阻抗 Contact Resistance	将样品与适合之 FFC/FPC 连接, 测试电压 20mV, 限电流 10mA 下进行阻抗测试。(EIA-364-23) Mate applicable FFC/FPC and measure by dry	30 mΩ 最大. 30 mΩ Max.

	circuit, 20mV Max, 10mA. (EIA-364-23)	
绝缘阻抗 Insulation Resistance	将样品与适合之 FFC/FPC 连接, 提供相邻端子间测试电压 500V DC 进行绝缘阻抗测试(EIA-364-21) Mate applicable FFC/FPC and apply 500V DC Between adjacent terminal or ground. (EIA-364-21)	500 MΩ 最小. 500 MΩ Min.
耐电压 Dielectric Strength	将样品与适合之 FFC/FPC 连接, 相邻端子间需可承受 500V AC(m) 1 分钟。(EIA-364-20) Mate applicable FFC/FPC, apply 500V AC(m) for 1 Minute between Adjacent Terminal or ground.(EIA-364-20)	目视外观无任何损坏 异状 No Breakdown

5.2 机械特性 MECHANICAL PERFORMANCE

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
插入力/拔出力 Insertion / Withdrawal Force	使用 FFC/FPC 扁线以每分钟 $25 \pm 3\text{mm}$ 速度进行插入力与拔出力测试 Insert the actuator, pull the FFC/FPC at a rate of $25 \pm 3\text{mm}$ per minute.	插入力最大: Pin*2N Insertion: Pin*2N Max 拔出力最小: Pin*0.3N Withdrawal Force: Pin*0.3N Min
端子保持力 Terminal Retention Force	端子与基座组装后, 以每分钟 $25 \pm 3\text{mm}$ 速度将端子垂直拔出。 Apply axial pull out force at the rate of $25 \pm 3\text{mm/minute}$ on the terminal assembled in the housing.	3N 最小 3N Min
焊片保持力 Fitting Nail Retention Force	焊片与基座组装后, 以每分钟 $25 \pm 3\text{mm}$ 速度将端子垂直拔出。 Apply axial pull out force at the rate of $25 \pm 3\text{mm/minute}$ on the Fitting Nail assembled in the housing.	3N 最小 3N Min

5.3 环境特性及其它性能 ENVIRONMENTAL PERFORMANCE AND OTHERS

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT
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耐久性 Durability	与 FFC/FPC 反复连接, 以每分钟 小于 10 cycles 连续操作 20 次。 Insert and withdraw actuator up to 20 cycles at the speed rate of less than 10 cycles/minute.	接触阻抗 Contact Resistance	50mΩ 最大. 50mΩ Max.
耐振性 Vibration	通过 DC 电流 1mA, 位移相对距离 1.5mm, 振动周期 10~55~10 Hz 在 1 分钟内, 持续 2 小时, 方向在 X,Y,Z 轴做测试。(EIA-364-28 Condition I) Mate connectors and subject to the following vibration conditions, for period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test. Amplitude : 1.5mm P-P Frequency : 10~55~10Hz in 1 minute. Duration : 2 hours in each of X,Y,Z axes. (EIA-364-28 Condition I)	外观 Appearance	目视外观无任 何损坏异状 No Damage
		接触阻抗 Contact Resistance	60mΩ 最大. 60mΩ Max.
		瞬间断电 Discontinuity	1 μ sec 最大 1 μ sec Max.
温度上升 Temperature Rise	量测通过 FFC/FPC 最大容许电流时, 样品 接触点之温升 (EIA-364- 70METHOD 2) Mate applicable FFC/FPC and measure the temperature rise of contact when the maximum AC rated current is passed.	温升 Temperature rise	30° C 最大. 30° C Max.

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT	
耐热性 Heat Resistance	将样品与适合之 FPC 连接, 置于环 境温度 85±2° C 测试时间 96 小 时, 再 置放于室温下 1~2 小时。 Mate applicable FPC and expose to 85 ±2° C for 96hours. Upon Completion of the exposure period, the test specimens shall be conditioned at Ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	外观 Appearance	目视外观无任 何损坏异状 No Damage
		接触阻抗 Contact Resistance	50mΩ 最大. 50mΩ Max.

耐寒性 Cold Resistance	将样品与适合之 FFC/FPC 连接, 置于环境温度$-40 \pm 2^{\circ}\text{C}$, 测试时间 96 小时, 再置放于室温下 1~2 小时。 Mate applicable FFC/FPC and expose to $-40 \pm 2^{\circ}\text{C}$ for 96 hours. Upon Completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60m Ω 最大. 60m Ω Max.
耐湿性 Humidity	将样品与适合之 FFC/FPC 连接, 置于环境温度$60 \pm 2^{\circ}\text{C}$, 相对湿度 90~95%, 测试时间 96 小时, 再置放于室温下 1~2 小时。 Mate applicable FFC/FPC and expose to $60 \pm 2^{\circ}\text{C}$, Relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the Test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60m Ω 最大. 60m Ω Max.
		耐电压 Dielectric Strength	需能符合耐电压测试 No Breakdown
		绝缘阻抗 Insulation Resistance	20 M Ω 最小. 20 M Ω Min
盐水喷雾 Salt Spray	将样品与 FFC 扁线连接, 使用 $5 \pm 1\%$ 浓度盐水, 测试温度 $35 \pm 2^{\circ}\text{C}$, 测试时间 24 ± 2 小时, 后于室温下使用清水冲洗后再干燥。 Mate applicable FPC and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the Specified measurements shall be performed. NaCl solution Concentration: $5 \pm 1\%$ Spray time: 24 ± 2 hours Ambient temperature: $35 \pm 2^{\circ}\text{C}$	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	50m Ω 最大. 50m Ω Max.

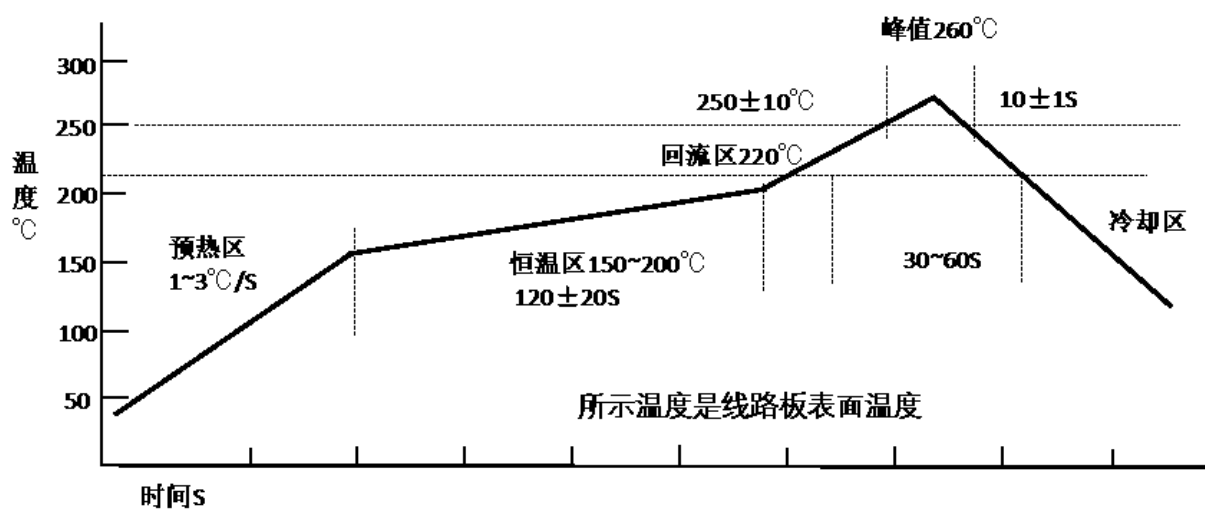
冷热冲击 Temperature Cycling	将样品与适合之 FFC/FPC 连接，承受 5 cycles 冷热冲击后置放于室温下 1~2 小时。1 cycle time 如下 a) $-55 \pm 3^{\circ}\text{C}$ 30 分钟 b) $+85 \pm 3^{\circ}\text{C}$ 30 分钟 Mate applicable FFC/FPC and subject to the following conditions for 5 cycles. Upon completion of the exposure period, The test Specimens shall be Conditioned At ambient room conditions for 1 to 2 hours, after Which the specified measurements shall be performed. 1 cycle a) $-55 \pm 3^{\circ}\text{C}$ 30minutes b) $+85 \pm 3^{\circ}\text{C}$ 30minutes	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60m Ω 最大. 60m Ω Max.

项目 ITEM	测试条件 TEST CONDITION	规格 REQUIRMENT	
耐冲击性 Shock	将样品与适合之 FFC/FPC 连接，通过 DC1 mA 测试条件，连续测试 3 次。在 X、Y、Z 3 轴 6 个垂直方向施予重力加速度 490m/s² {50G} 冲击。 (EIA-364-27, test condition A) Mate applicable FFC/FPC and subject to the following shock conditions. 3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1mA current during the test. (Total of 18 shocks) Peak value : 490m/s² {50G} (EIA-364-27, test condition A)	外观 Appearance	目视外观无任何损坏异状 No Damage
		接触阻抗 Contact Resistance	60m Ω 最大. 60m Ω Max.
		瞬间断电 Discontinuity	1 μ sec 最大 1 μ sec Max.

焊锡性 Solderability	锡温 $245 \pm 5^{\circ}\text{C}$ ，将导电端子浸入锡炉液面至 Housing 距离锡面 0.1mm 位置，焊锡时间 3 ± 0.5 秒。 Tip of solder tails and fitting nails into the molten solder (held at $245 \pm 5^{\circ}\text{C}$) up to 0.1mm from the bottom of the housing for 3 ± 0.5 seconds.	润湿性 Solder Wetting	润湿面积 95% 以上，并不得有漏焊针孔现象 95% of immersed area must show no voids, pin holes.
焊锡耐热性 Resistance to Soldering Heat	使用回焊时请参考第 6。 When reflowing Refer to paragraph 6. 使用烙铁手焊时须可符合下述焊锡条件 Soldering iron method 0.2mm from terminal tip and fitting nail tip. Soldering time : 5 seconds Max. Solder temperature : $370 \sim 400^{\circ}\text{C}$	外观 Appearance	目视外观无任何损坏异状 No Damage

6. 回焊温度曲线 INFRARED REFLOW CONDITION

无铅回流焊，峰值 260°C ，建议温度条件。



7.包装、运输、贮存

7.1.包装 Packing

该系列产品包装按照客户要求，有编带、管装等方式。

This series of products are packaged in accordance with customer requirements, such as tape, tube and so on

7.2.运输 Transportation

允许用任何方式运输，但需避雨、雪直淋和受机械性损伤

Any vehicle can be adopted for the transportation, but moisture-proof and no mechanical damage.

7.3.贮存 Storage

7.3.1.包装完毕的连接器应在环境温度为 $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ，相对湿度不大于 80%，周围空气中没有酸性，碱性及其它腐蚀性气体的库房中贮存。

Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Relative humidity: $\leq 80\%$

Not to storage in corrosive environments

7.3.2.贮存期为 3 个月，超过 3 个月需重新检查。

Re-qualification test shall be conducted immediately while the storage duration exceed 3 months