



规格书

SPECIFICATION

CUSTOMER NAME	客户名称:	
CUSTOMER NO.	客户编号:	
SERIES	系 列:	快插式LED连接器
MODEL NO.	型 号:	XB-LED series
DRAWING NO.	图 形 号:	QUICK PLUG-IN LED CONNECTOR

If specification of this product meets your request, please confirm all the items of it and return to us with signature and stamp, it will be basis of our production and record. Thanks your cooperation in advance!

若此产品规格符合贵司要求，敬请确认此规格书内所有项目
并签名和盖章后回传给我司，以作我司产品制作之

依据和存档之用，多谢合作！

EXAMINE & APPROVAL 审批

APPROVE 接受	NOT APPROVE 不接受
SIGNATURE 签署 STAMP 盖章 DATE 日期	

PREPARED BY.制表人	CHECKED BY.校对	APPROVED BY.审核	APPROVAL BY.批准
研发部	品质部	工程部	总经办
戴海明	黄自清	庞军	吴量
2022. 06. 08	2022. 06. 08	2022. 06. 08	2022. 06. 08

东莞市溪榜电子有限公司

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Quality core! Afterburner for Made in China!



产品规格书 PRODUCT SPECIFICATION

1. 适用范围 SCOPE

本规格书适用于 LED 电源直插入式连接器系列产品。

This specification applies to the LED power supply direct plug-in connector series of products.

2. 适用的标准 APPLICABLE STANDARDS

- | | | |
|-----|----------|---|
| 2.1 | GB/T2421 | 电工电子产品环境试验 第一部分 总则
Testing method for Environmental of Electrical Connectors
Class 1:general Principles |
| 2.2 | GB/T2423 | 电工电子产品环境试验方法
Testing method for Environmental of Electrical Connectors |
| 2.3 | GB/T2424 | 电工电子产品环境试验导则
Testing method for Environment of Electrical Connectors |
| 2.4 | GB/T5095 | 电子设备用机电元件基本试验规程及测量方法
Testing Procedure/method for components of Electrical Equipment |

3. 外观及尺寸 APPEARANCE AND DIMENSION

3.1 外观 appearance

经目视观察，外观不可有变形，电镀脱落等会降低其功能的异常现象，也不可有严重破裂、刮伤或污损之缺点。

By looking, there shall not be any abnormality such as deformity, exfoliation of plating,etc., which can reduce performance. No defect such as cracks scratches or blemishes.

3.2 尺寸 measure

参照工程图

With reference to engineering drawing

3.3 互换性 interchangeability

互换性：相同规格应能互换

Exchangeable: Exchangeable with same specification products

3.4 建议 PCB LAYOUT 图 Recommended PCB LAYOUT drawing

参照工程图

With reference to engineering drawing



东莞市溪榜电子有限公司

DONG GUAN XI BANG ELECTRONICS CO., LTD

PRODUCT No:

XB-LED CONNECTOR SERIES

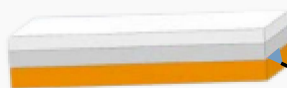
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LED连接器产品规格书 PRODUCT SPECIFICATION

4. 材质 THE MATERIAL

P/N(零件名称)	TYPE(类型)	Material(材料)	Finish(表面处理)	Explain(说明)
L2503AFV 插线	Plastic (塑胶)	LCP (UL94V-0)		ROHS Compliant
	Contact (簧片)	Phosphor bronze(磷青铜)	Nickel and tin plating 镍底镀锡	

工艺介绍



镀锡 Tin plated over
镍底 Nickel underplated
原材/基材 Material

5. 标准额定值 RATINGS

项 目 ITEM	规 格 SPECIFICATIONS
额 定 电 压 Rated Voltage	275V
额 定 电 流 Rated current	1A AC /DC
温 度 范 围 Temperature Range	-40°C ~ +120°C
湿 度 范 围 Humidity range	相对湿度 90% 以下 Relative humidity 90% max
保存温度范围 Storage temperature range	-10°C ~ +50°C
保存湿度范围 Storage humidity range	相对湿度 90% 以下 Relative humidity 90% max

6. 部件名称&部件编号 Part name & part number

部 件 名 称 Part name	部 件 编 号 Part number
Housing	
Terminal	
Wafer (DIP)	
Wafer (SMT)	XB-L2503AFV-02-1/XB-L2503AFV-02-2



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7. 电气特性 ELECTRICAL EFFICIENCY

No. 编号	项目 Item	试验方法 Test Method	性能要求 Requirement
7.1	接触电阻 Contact Resistance	测量时将连接器插合，两端施以最大测试电压 20mV 以及最大测试电流 100mA，测量时减去导线电阻值。 (GB/T5095.2-2b) Mate connectors, load voltage: A maximum voltage of 20mV and a maximum current of 100mA are applied to the Mate connector. (GB/T5095.2-2b)	20mΩ Max.
7.2	绝缘电阻 Insulation Resistance	相邻接触体 1 分钟时间内施加 250V DC 电压进行测试，测量期间的绝缘阻抗值。(GB/T5095.2-3a) Mate connectors, Apply 250V DC(rms) for 1minute between adjacent contacts to measure the insulation resistance. (GB/T5095.2-3a)	1000MΩ Min.
7.3	耐电压 Withstanding Voltage	在各相邻接触件间施加 1500V AC 之电压持续 1 分钟。 (GB/T5095.2-4a) Mate connectors, apply 1500V AC for 1 minute Between adjacent terminal or ground. (GB/T5095.2-4a)	无击穿或者产生火花 No breakdown or flashover

8. 环境特性 ENVIRONMENTAL EFFICIENCY

No. [编号]	项目 Item	试验方法 Test Method	性能要求 Requirement	
8.1	耐热试验 Heat Resistance	将连接器放在温度为+120±2℃的环境中 96 小时，再置于室温下 1~2 小时。(GB/T5095.6-11j) Mated connector shall be placed in an environmental for 96 hours at +120±2℃, Again in 1 ~ 2 hours at room temperature. (GB/T5095.6-11j)	外观 Appearance	目视外观无任何损坏异状 No Breakdown
			接触阻抗 Contact Resistance	30mΩ Max.
8.2	耐冷试验 Cold Resistance	将连接器放在温度为-40±3℃的环境中 96 小时，再置于室温下 1~2 小时。(GB/T5095.6-11i) Mated connector shall be placed in an environmental for 96 hours at -40±3℃ Again in 1 ~ 2 hours at room temperature. (GB/T5095.6-11i)	外观 Appearance	目视外观无任何损坏异状 No Breakdown
			接触阻抗 Contact Resistance	30mΩ Max.



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8.3	耐湿性试验 Humidity	把插合的连接器, 温度 $40 \pm 2^{\circ}\text{C}$, 相对湿度 90~96% 的环境中, 持续 96 小时。经试验后, 连接器须于室温中放置 1~2 小时, 再测定其值。 (GB/T5095.6-11c) Mate connectors, $40 \pm 2^{\circ}\text{C}$ in temperature and 90~95%RH in an environmental for 96 hours. After testing connector shall be left alone for 1 to 2 hours in a room ambient. (GB/T5095.6-11c)	外观 Appearance	目视外观无任何损坏异状 No Breakdown
			绝缘电阻 Insulation Resistance	500M Ω MIN.
			耐电压 Withstanding Voltage	750V AC/minute MIN
8.4	温度循环 Temperature Cycling	低温: $-40 \pm 3^{\circ}\text{C}$, 30 分钟, 放置转换时 10-15 分钟 高温: $+120 \pm 3^{\circ}\text{C}$, 30 分钟, 放置转换时 10-15 分钟 5 次循环后放置在正常环境中恢复 2 小时后进行测试。(GB/T5095.6-11d) Low temperature: $-40 \pm 3^{\circ}\text{C}$, 30min, room temp10-15min high temperature: $+120 \pm 3^{\circ}\text{C}$, 30min, room temp10-15min After 5 cycles at the normal environment for testing after 2 hours. (GB/T5095.6-11d)	外观 Appearance	目视外观无任何损坏异状 No Breakdown
			接触电阻 Contact Resistance	30m Ω Max.
8.5	盐雾试验 Salt spray	盐水比重: $5 \pm 1\%$ 温度: $35 \pm 2^{\circ}\text{C}$ 试验时间: 24 ± 2 小时, 试验结束后用清水将残留盐份清洗并将水滴清除后, 才可测量。 (GB/T5095.6-11f) Salt concentration: $5 \pm 1\%$ Temperature: $35 \pm 2^{\circ}\text{C}$ Testing time: 24 ± 2 hours, After salt is removed by running water and a drop is removed, it is measured. (GB/T5095.6-11f)	外观 Appearance	镀层无剥落, 无分离, 无裂痕起皱, 表面的腐蚀面积小于 5% No peeling, no separation, no cracking and wrinkling of the coating, the surface corrosion area is less than 5%
			接触电阻 Contact Resistance	30m Ω Max.
8.6	Solderability [可焊性试验]	焊锡时间: 2.5 ± 0.5 秒 焊锡温度: $245 \pm 5^{\circ}\text{C}$ (GB/T5095.6-12a) Soldering time: 2.5 ± 0.5 S Solder Temperature: $245 \pm 5^{\circ}\text{C}$ (GB/T5095.6-12a)	焊锡面积 $\geq 95\%$ 95% min. of solder area	

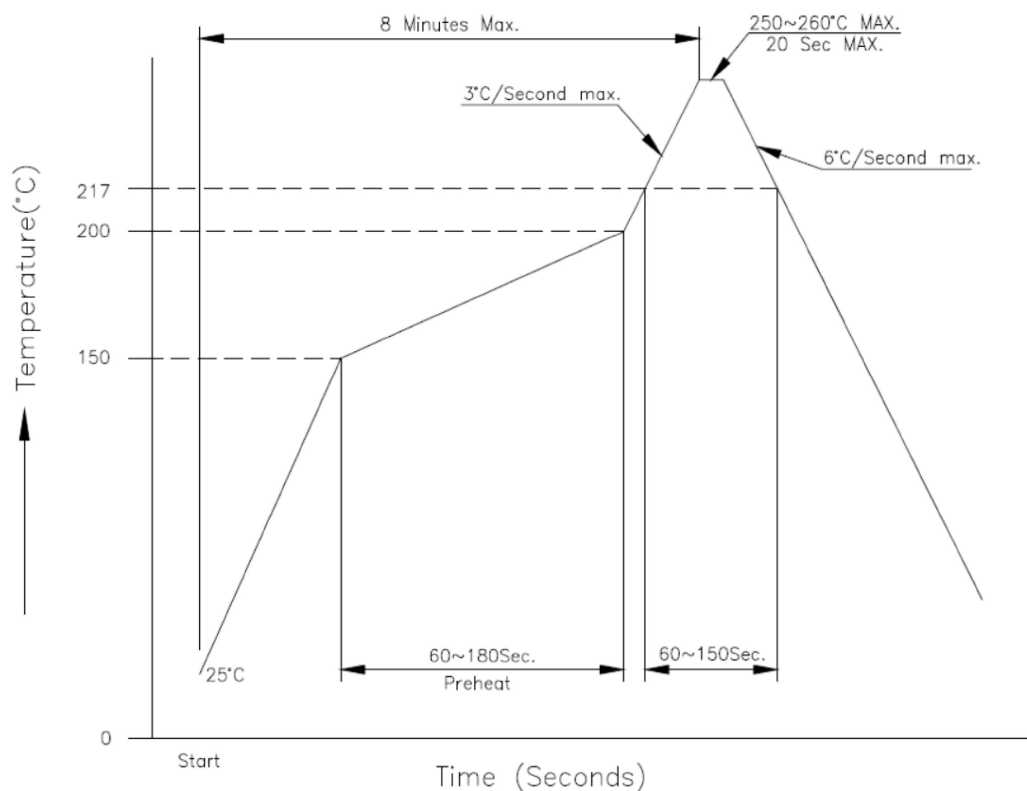


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8.7	耐焊性 Resistance to soldering heat	将连接器置于 PCB 板上，然后将产品通过 260℃ ± 5℃ 回流焊 5 ± 1S 进行测试。(GB/T5095.6-12d) Puts the connector on the PCB, and then the product through 260 °C ± 5 °C reflow 5 ± 1 s test. (GB/T5095.6-12d)	塑胶不得有明显的变形或损坏。 1. Without deformation of case or excessive losses. 电气特性必须符合规格 2. Electrical characteristics shall be satisfied.
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推荐回流焊炉温曲线:

8.8 Recommended IR Reflow Temperature Profile:



温度条件参考图
TEMPERATURE CONDITION GRAPH

9. 机械特性 MECHANICAL EFFICIENCY

No. [编号]	项目 Item	试验方法 Test Method	性能要求 Requirement
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9.1	PIN 固定力 Pin retention force	固定连接器基座, 在连接器单一接触件轴线方向上施加推力, 施力速率 $\leq 10\text{N/S}$, 将接触件从基座中推出. (GB/T5095.8-15a) Fixed the wafer of the connector, then apply thrust at a speed $\leq 10\text{N/S}$ push force the single contact of the connector; push the contact out of the wafer. (GB/T5095.8-15a)	单一 PIN 针 5N Min. Only per PIN	
9.2	机械寿命 Mechanical Life	1、连接器必须承受 50 次的插拔循环 2、测试速度: 100mm/分种 (GB/T5095.5-9a) 1、Connectors shall be subjected to 50 cycle of Insertion and Withdrawal. 2、Speed: 100mm/minute. (GB/T5095.5-9a)	接触电阻 Contact Resistance	30m Ω Max.
9.3	插入力&拔出力 Insertion force (I.F.) & withdrawal force (W.F.)	以操作速度 $20 \pm 5 \text{ mm/minute}$ 移动, 进行端子之间的插入力及拔出力测试. (GB/T5095.7-13b) At operating speed move $20 \pm 5 \text{ mm/minute}$, carries on the light board and drive board between insertion force and drawing output test. (GB/T5095.7-13b)	单一接触点 Per contact 插入力 $\leq 15\text{N}$ 拔出力 $\geq 30\text{N}$ 24AWG 线	



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工程变更记录

版本号	变更日期	变更描述
A/2	2023.8.6	8.5 外观按行业标准修订
A/3	2023.8.6	8.6&8.7&8.8 按行业标准修订