

# SPECIFICATION

Customer part

Number: **LLN-7E17-XXXX-X-0303-2835-18-7470-C AL SL019**

Product model

Part No. : **LLN-7E17-XXXX-X-0303-2835-18-7470-C AL**

Product description: **Direct-lit panel light strip**

Edition Version: **A0**

Supplier (Seal)			Customer (Seal)
Create	examine and verify	ratify	examine and verify
Min Rui			

Note: After confirming OK, please sign and affix your seal. The acknowledgment document shall be valid as of the latest signing date. Any older version will automatically become invalid upon version upgrade.

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## Change Resume Form

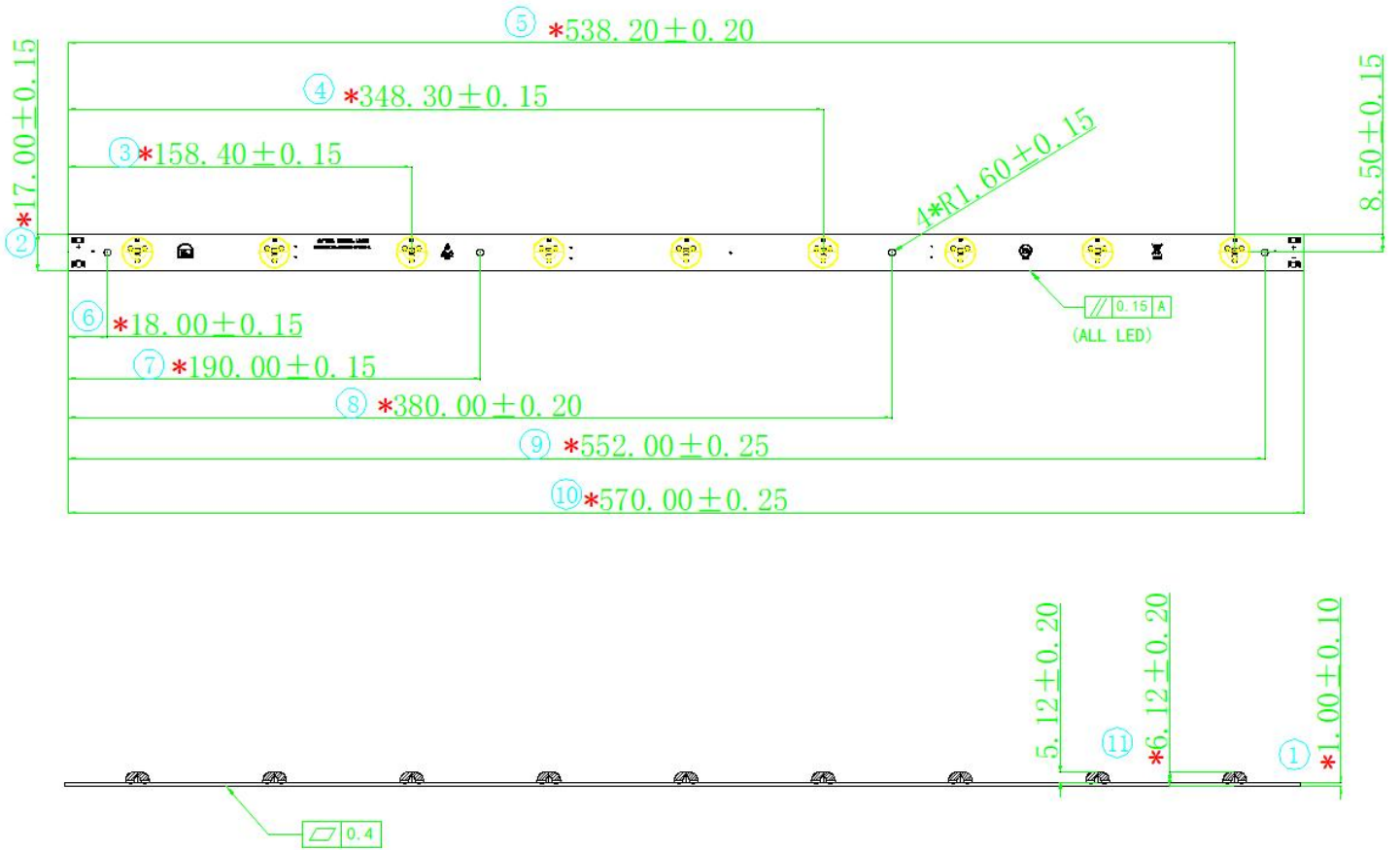
edition	Change content description	date
<b>A0</b>	First edition release	<b>2026-04-07</b>



catalogue

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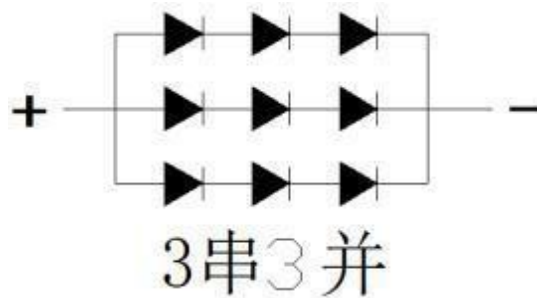
# 1、Light strip size diagram



( unit : mm)

encoding	project	representative value	common difference
1	PCB length	570	±0.3
2	PCB width	17	±0.15
3	PCB thickness	1	±0.1

## 2. Light strip circuit diagram



Three series and three parallel

## 3. Light Strip Specifications Table

Main materials for light strips

Project	Quantity (pcs)	Content
Substrate	1	M08-XX-DCL-28-0303-N-7470-B; Aluminum substrate; RevB; Dimensions: 570*17*1.0mm; Weight: 1 oz; V-joint; Solder mask thickness: 20-30μm; High-reflectivity milky white ink (reflectivity>85%); Pad OSP treatment; Screen-printed font: black;
LED	9	2835K06-XXX10-2S2P-T12-EC
Lens	9	PMMA material φ13.5mm lens PMMA material φ13.5mm lens

Maximum limit value

Project	Content
storage temperature	-20~+70°C
High-temperature and high-humidity storage	Max.90 % @ Ta 60°C
working temperature	-20~+60°C
high temperature and high humidity working conditions	Max.90 % @Ta 50°C
PCB current-carrying	≤3200mA
PCB copper thickness (finished product)	≥30um
LENS push-pull effort	The thrust parallel to the long side is ≥ 10 kg/f
	Tensile force perpendicular to the PCB surface ≥ 5 kg/f

Electrical characteristics

Project	Least value	Representative value	Crest value	Unit
Operating current	--	450	--	mA
Operating voltage (If=450mA)	16.2	17.6	18.6	V

**Note: To ensure the performance of L/B, it is recommended to keep the operating current within typical values. Optical parameters: Operating current**

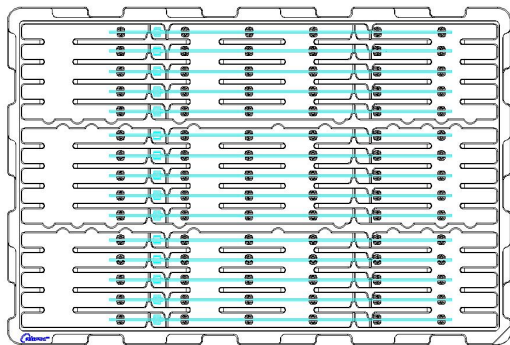
CCT	CCT Range(K)	Color bin	Center		Flux(lm)			Ra	R9	SDCM
			CIE-x	CIE-y	Min	Typ	Max			
4000K	3763-4228	A40	0.3818	0.3797	1260	1350	1440	≥80	> 50	≤5
5000K	4738-5343	A50	0.3447	0.3553	1260	1350	1440	≥80	> 50	≤5
4000K	3763-4228	A40	0.3818	0.3797	1190	1280	1360	≥90	> 50	≤5
5000K	4738-5343	A50	0.3447	0.3553	1190	1280	1360	≥90	> 50	≤5

## 4. Packaging specifications for light strips

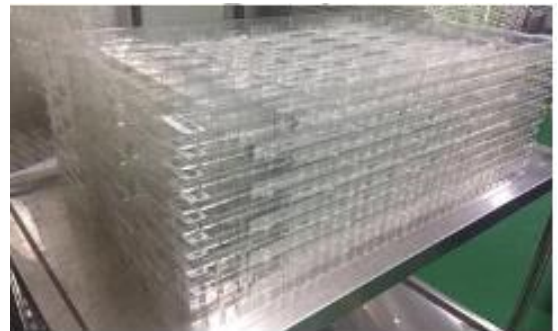
### (1). Packaging Information

Number of pieces per tray (PCS)	Number of pallets per box (PCS)	total quantity (PCS)	total weight ( Kg)	carton size (mm)		
				long	wide	Gao
30	11+1 (blank)	330	16.45	730	490	320

### (2). Packaging schematic diagram:



1. Each tray contains 30 pieces of light strips;



2. The maximum stackable pallet depth is 12 layers (11+1 empty pallets);



3. Total of 12-tier pallets (330 pieces of light strips) and securely wrap with plastic wrap;



4. Place the product with the wrapping film securely fastened into a PE bag and secure it to prevent shaking;



5. Pack the items into boxes and affix inner labels, with 330 light strips per box.



6. Seal the boxes and affix external box labels, then record the total number of boxes and the current number of boxes on each box;

(3).Label format example:

Material shipping label	
Customer product model	
Customer Product Order Number	
Shineon product model	
Bin Code	
Quantity (Pcs)	
Date	
OQC judge	

## 5. LED Characteristics

Luminous flux  $\Phi$  (tolerance:  $\pm 5\%$ ):

2835K06-40X10-2S2P-T12-EC	150mA	80(H)	Q63	165-175	LM
			Q73	175-185	
		90(S)	Q53	155-165	
			Q63	165-175	
2835K06-50X10-2S2P-T12-EC	150mA	80(H)	Q63	165-175	LM
			Q73	175-185	
		90(S)	Q53	155-165	
			Q63	165-175	

### LED voltage bin

Voltage BIN code	150mA	
	least value (v)	crest value (v)
C7	5.4	5.6
C8	5.6	5.8

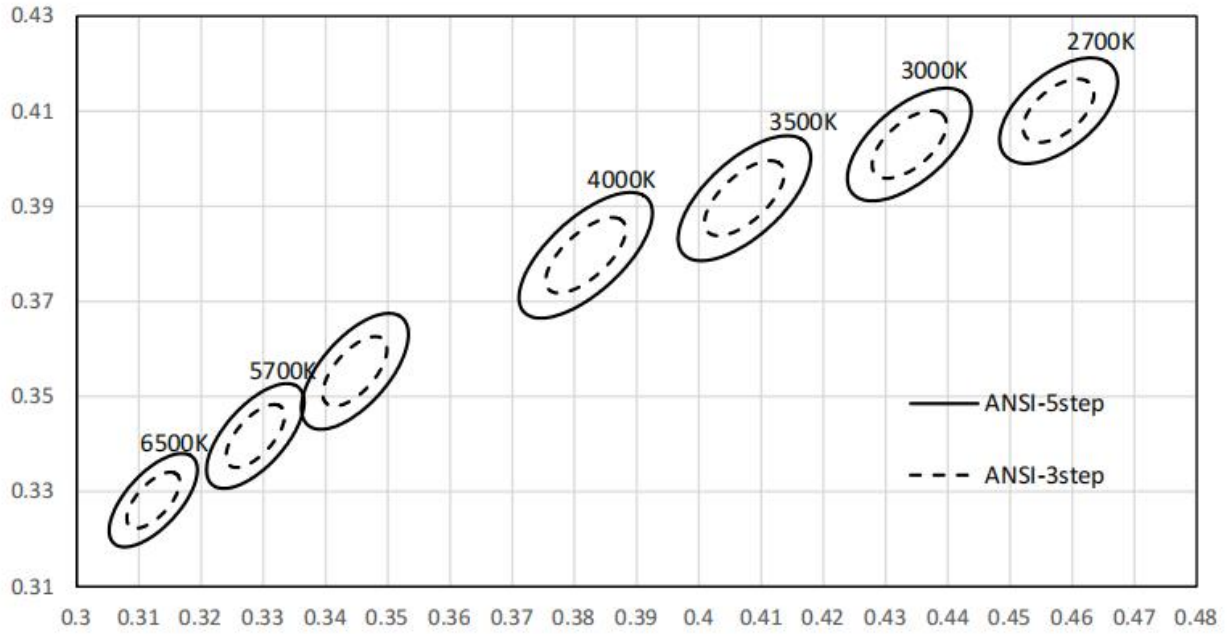
Forward voltage  $V_F$  (tolerance:  $\pm 0.03V$ )

## CIE1931(X,Y)

### Color Bin Definitions 色坐标

Bin Code 等级代码	Center Point		MAJOR AXIS (a ,b).		Theta。
	x	y	3-Step	5-Step	
2700	0.4578	0.4101	(0.00774, 0.00411)	(0.0129, 0.00685)	53.17
3000	0.4338	0.403	(0.00834, 0.00408)	(0.0139, 0.0068)	53.22
3500	0.4073	0.3917	(0.00927, 0.00414)	(0.01545, 0.0069)	54
4000	0.3818	0.3797	(0.00939, 0.00402)	(0.01565, 0.0067)	53.72
5000	0.3447	0.3553	(0.00822, 0.00354)	(0.0137, 0.0059)	59.62
5700	0.3287	0.3417	(0.00747, 0.00318)	(0.01245, 0.00475)	59.13
6500	0.3123	0.3282	(0.00669, 0.00285)	(0.01115, 0.00475)	58.57

The reference map color area 色区参考图



Notes 注:

1. The above color coordinates measurement allowance tolerance is 0.005. 以上所示坐标测量误差 0.005。
2. Some color and CRI bins may have limited availability, please contact us before ordering. 部分颜色和显指可能有限制，请在订购前与我们联系。

## 6. Maximum LED limit value (ambient temperature = 25°C):

**Absolute Maximum Ratings at Ts=25°C 最大限定参数**

Parameter 参数	Symbol 符号	Value 值	Units 单位
Forward Current 正向电流	IF	180	mA
Peak Forward Current 正向脉冲电流	IFP	250	mA
Power Dissipation 功耗	PD	1000	mW
Electrostatic Discharge 静电击穿电压	ESD	2000HBM	V
Storage Temperature 储存温度	Tstg	-40~+100	°C
Operating Temperature 操作温度	TOPR	-40 ~ +85	°C
Soldering Temperature 焊接温度	Tsld	Reflow Soldering: 260°C for 10 seconds	
Junction Temperature 结温	TJ	125	°C

\*IFP condition: pulse width ≤ 0.1 msec, period ≤ 1/10

## 7. LED optoelectronic characteristic parameters (ambient temperature = 25°C)

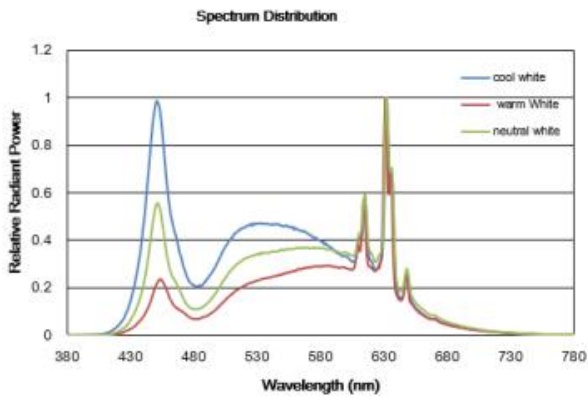
### Electrical/Optical Characteristics at Ts=25°C 电性与光学特性

Item 项目	Symbol 符号	Testcondition 测试条件	Value			Unit 单位
			Min. 最小值	Typ 典型值	Max. 最大值	
Forward Voltage 正向电压	VF	IF=150mA	5.4	5.58	5.8	V
Viewing Angle 发光角度	2θ <sub>1/2</sub>	IF=150mA	---	120	---	deg
Luminous Flux 光通量	Φ	IF=150mA	135	---	185	Lm
Color Rendering Index 显色指数	CRI80	IF=150mA	80	---	---	--
	CRI90	IF=150mA	90	---	---	--
Color Temperature 色温	CCT	IF=150mA	2600	---	7000	K
Thermal Resistance. (热阻)	RTHJ-S	IF=150mA	---	13	---	°C/W

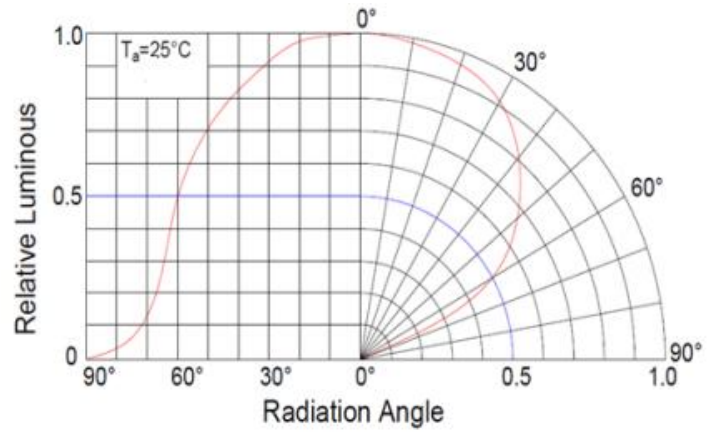
#### Notes 注:

- Luminous flux is measured with an accuracy of ± 5%. 光通量的测量精度为 ± 5%。
- The above forward voltage measurement allowance tolerance is ± 0.1V. 以上所示电压测量误差 ± 0.1v。
- CRI is measured with an accuracy of ± 2. 显色指数测量精度为 ± 2。
- All measurements were made under the standardized environment of Shineon. 所有测试都是基于易美现有的标准测试平台
- Care is to betaken that power dissipation does not exceed the absolute maximum rating of the product. 使用功率不能超过规定的最大值。
- When the LEDs are in operation the maximum current should be decided after measuring the package temperature , junction temperature should not exceed the maximum rate. LED使用的最大电流需要根据散热条件确定，结温不能超过最大值。
- ESD yield is over 90% at 2000V ESD (HBM). ESD protection during products handing is needed.  
90%的LED通过人体模式ESD2000V 测试， 在操作时请注意静电防护。

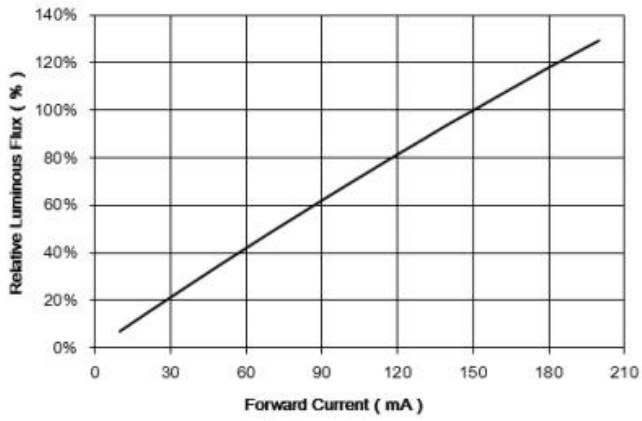
## 8. Typical Photoelectric Parameter Curve of LED



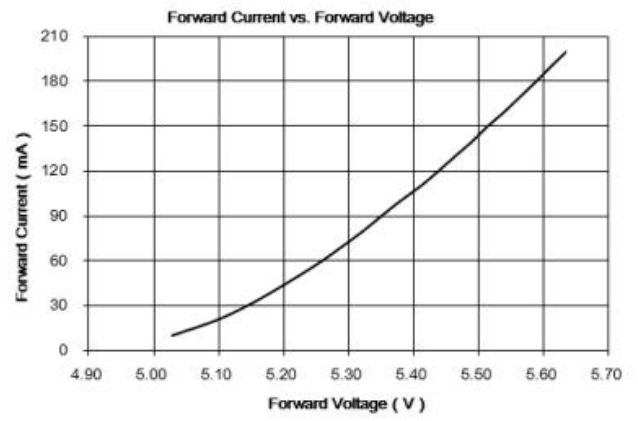
Typical spectral distribution  
典型光谱分布



Typical Light-Emitting Angle Radiation Pattern  
典型发光角度辐射图



Forward Current Vs. Relative Intensity  
正向电流与相对光强特性曲线

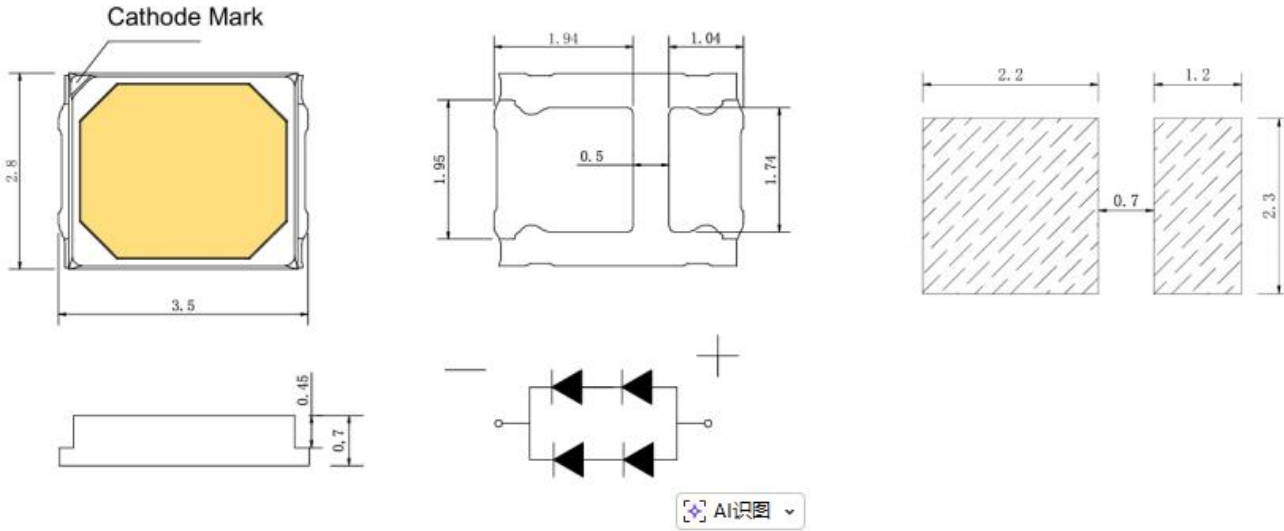


Forward Voltage Vs. Forward Current  
伏安特性曲线

## 9. LED structural dimension diagram

◆ Package Dimensions 封装尺寸

◆ Recommended soldering pattern 建议焊盘尺寸图



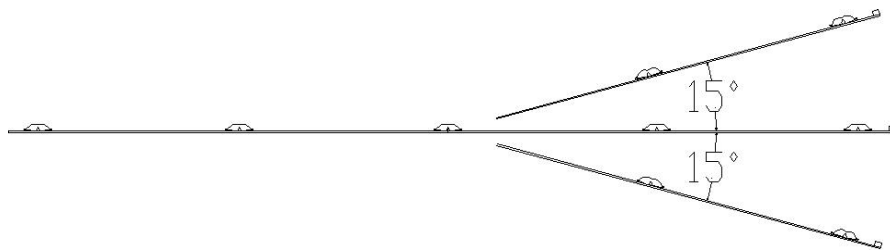
Notes:

1. All dimensions in millimeters. 所有尺寸单位为mm
2. Thickness tolerance of copper plate is  $\pm 0.02\text{mm}$ . 铜材料片厚度公差为 $\pm 0.02\text{mm}$
3. Thickness tolerance of product is  $\pm 0.05\text{mm}$ . 产品厚度公差为 $\pm 0.05\text{mm}$
4. Tolerance is  $\pm 0.1\text{mm}$  unless otherwise noted. 如未特别注明, 默认公差为 $\pm 0.1\text{mm}$
5. Specifications are subject to change without notice. 规格如有变更, 恕不另行通知。

## 10. Application Precautions

- 1) LED light strips should be stored in an environment with a temperature of 20-30°C and relative humidity of 60% or less. Direct sunlight exposure should be avoided, and the maximum storage duration should not exceed 6 months.
- 2) Wear gloves when handling light strips and install them correctly on customer products. LED light strips must not be bent, as bending may cause LED solder detachment or circuit disconnection.

If the PCB bending angle exceeds 15°, the lens may detach.



- 3) Connect the LED light strip correctly to the circuit and avoid mechanical impacts to prevent damage.
- 4) When using LED light strips, heat generation must be incorporated into the overall design considerations. The light strips should not be suspended but must maintain tight contact with the housing to prevent overheating and damage during LED operation.
- 5) When using LED light strips, it is essential to apply resistance or driver protection; otherwise, high current and voltage may cause LED damage and wavelength shift.
- 6) Manual repair of LED light strips may cause chip damage; therefore, it is recommended to use a heating platform with temperature controlled between 230-260°C.

Duration 5 seconds.

- 7) Damaged LEDs will exhibit abnormal characteristics such as significantly increased leakage current, reduced forward voltage, and failure to illuminate with low current.
- 8) Warning: Avoid staring directly at LED lighting as it may cause eye injury.