承　认　书

客户名称：_____

物料编码：_____

产品型号：**JK-2835黄光-60**

编　　号：_____

日　　期： **2024-09-04**

产品描述:

- **贴片2835黄光-0.2W高亮贴片灯珠 -橙色**
- 胶体颜色:**透明**

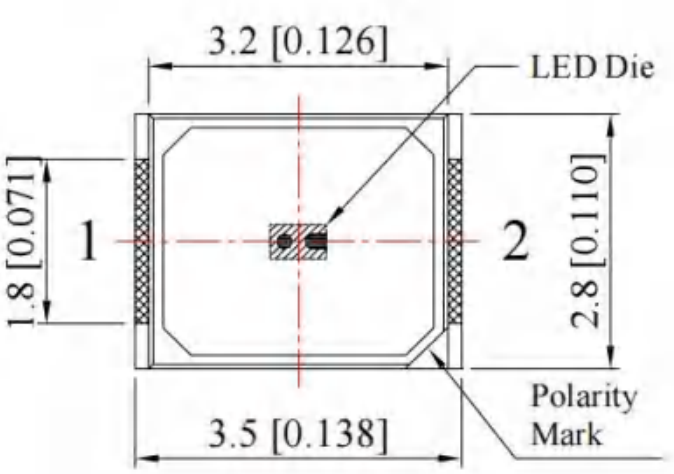
承 认 签 章		
编制	**审核**	**核准**

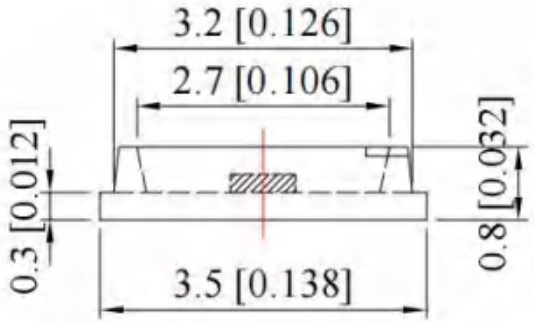
客 户 确 认		
确认	**审核**	**核准**

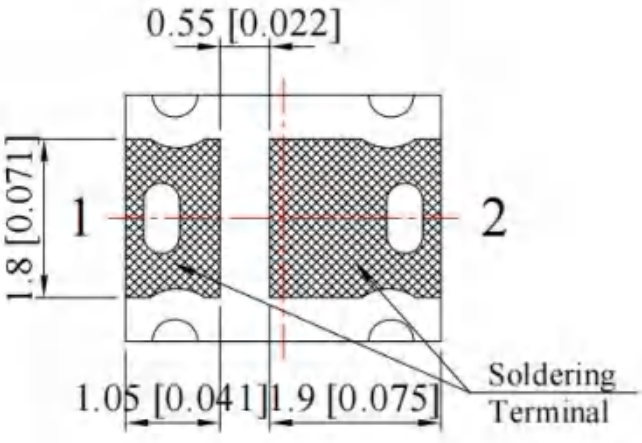
Features

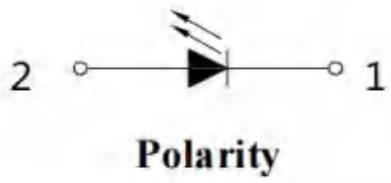
- Package：3.5mm*2.8mm*0.7mm
- Emitted colour:：yellow
- Comply ROHS standard
- High intensity
- Extremely wide view angle
- Anti-electrostatic tape package
- Reliable and stable

Package Outline Dimensio









NOTES

All dimensions are in millimeters (inches);

Tolerances are ±0.2mm (0.008inch) unless otherwise noted.

Absolute maximum ratings at Ta=25℃

Parameter	Symbol	Typical	Unit
Power dissipation	Pd	200	mW
Forward current	If	60	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-40 ~+85	℃
Storage temperature range	Tstg	-40~+100	℃
Lead Soldering Temperature/Time	T_{SOL}	240/≤3S	℃/S
Peak pulsing current	Ifp	100	mA
IFP Conditions: Pulse Width≦10msec. and Duty cycle≦1/10.			

Electrical-optical characteristics at Ta=25℃

Parameter	Test Condition	Symbol	Typical			Unit
			Min.	Typ.	Max.	
Forward voltage	If=60mA	Vf	2.5	--	2.7	V
Luminous intensity	If=60mA	Iv	5	--	7	LM
Dominant Wave Length	If=60mA	Tc/λd		--		k
Peak Wave Length	If=60mA	λ_p	590		595	nm
Color rendering index	If=60mA	Ra	--		--	
Viewing angle at 50% Iv	If=60mA	2 θ 1/2	--	120	--	Deg
Reverse Current	Vr=5V	Ir	--	--	≤10	μA

Typical optical characteristics curves

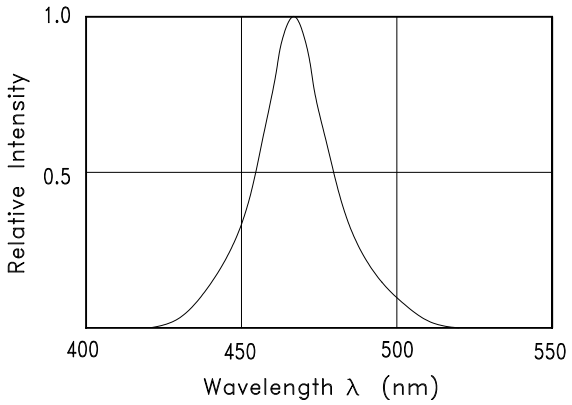


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

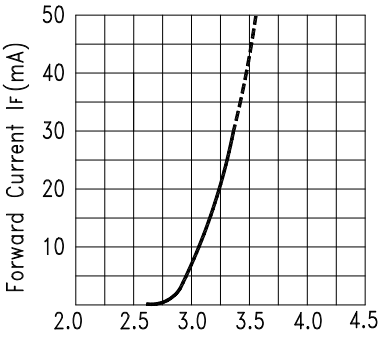


Fig.2 Forward Current vs. Forward Voltage

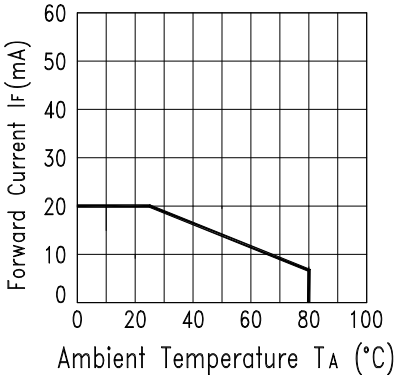


Fig.3 Forward Current Derating Curve

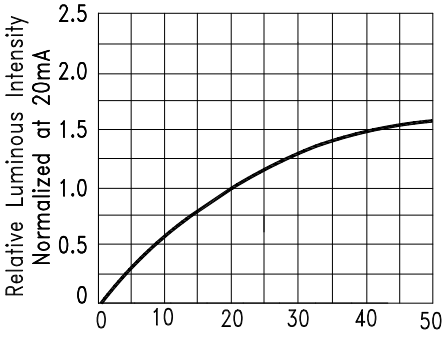


Fig.4 Relative Luminous Intensity vs. Forward Current

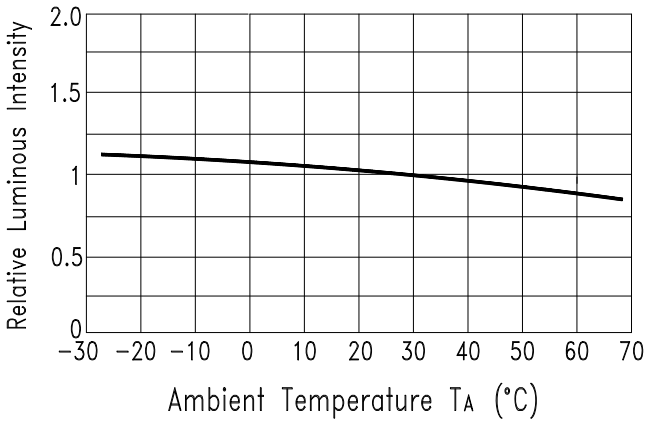


Fig.5 Luminous Intensity vs.Ambient Temperature

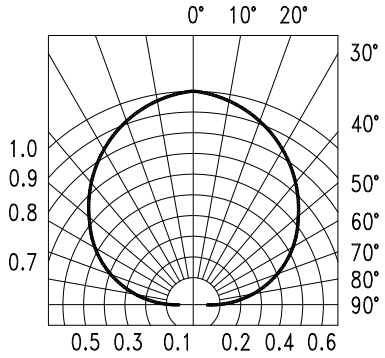


Fig.6 Spatial Distribution

(1) TEST ITEMS AND RESULTS

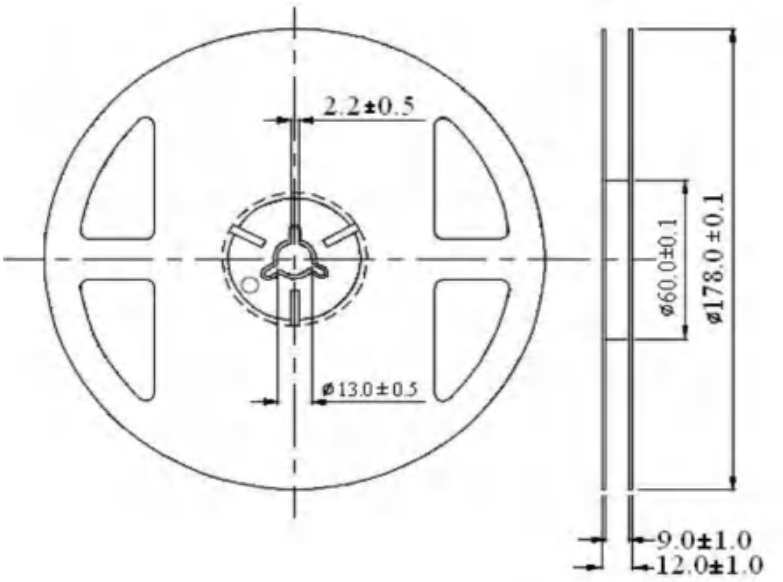
Test Item	Standard Test Method	Test Conditions	Note	Number of Damaged
Resitance to Soldering Heat (Reflow Soldering)	JEITA ED-4701 300 301	Tsld=260℃, 10sec. (Pre treatment 30℃,70%,168hrs)	2 times	0/50
Solderability (Reflow Soldering)	JEITA ED-4701 300 303	Tsld=215±5℃, 3sec. (Leader Solder)	1time over 99%	0/50
Thermal Shock	JEITA ED-4701 300 307	-40℃~100℃ 5min. 5min.	100cycles	0/50
Temperature Cycle	JEITA ED-4701 100 105	-40℃~25℃~100℃~25℃ 30min. 5min. 30min. 5min.	100cycles	0/50
High Temperature Storage	JEITA ED-4701 200 201	Ta=100℃	1000 hrs	0/50
High Temperature High Humidity Storage	JEITA ED-4701 100 103	Ta=80℃, 80%RH	1000 hrs	0/50
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40℃	1000 hrs	0/50
Steady State Operating Life		Ta=25℃, IF=20MA	1000 hrs	0/50
Steady State Operating Life of High Temperature		Ta=85℃, IF=5mA	1000 hrs	0/50
Steady State Operating Life of High Humidity Heat		60℃, 90%RH, IF=15mA	500 hrs	0/50
Steady State Operating Life of Low Temperature		Ta=-30℃, IF=20MA	1000 hrs	0/50

(2) CRITERIA FOR JUDGING THE DAMAGE

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	V_F	I_F=60MA	-	U.S.L.*)X1.1
Reverse Current	I_R	VR=5V	-	U.S.L.*)X2.0
Luminous Intensity	I_V	I_F=60MA	L.S.L.**)X0.7	-

*) U.S.L.：Upper Standard Level　　**) L.S.L.：Lower Standard Level

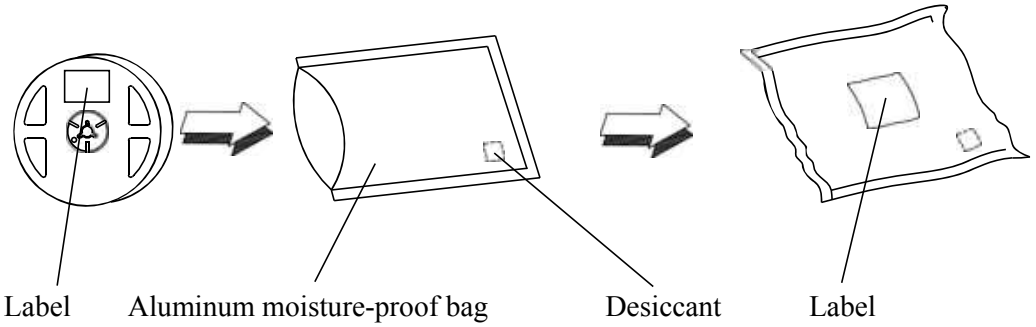
Reel Dimensions:

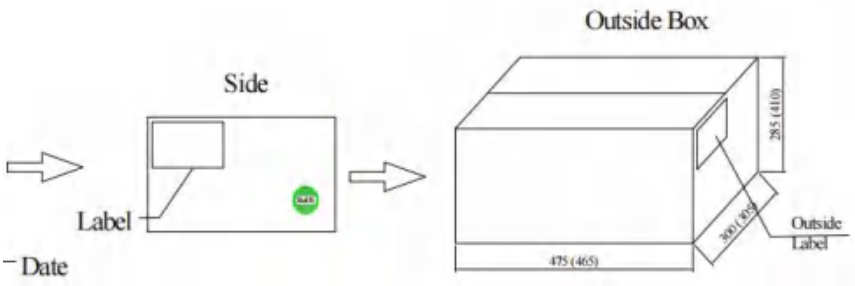


Unit: mm
Tolerance: ±0.25mm

Packing & Label Specifications:

Moisture Resistant Packaging:





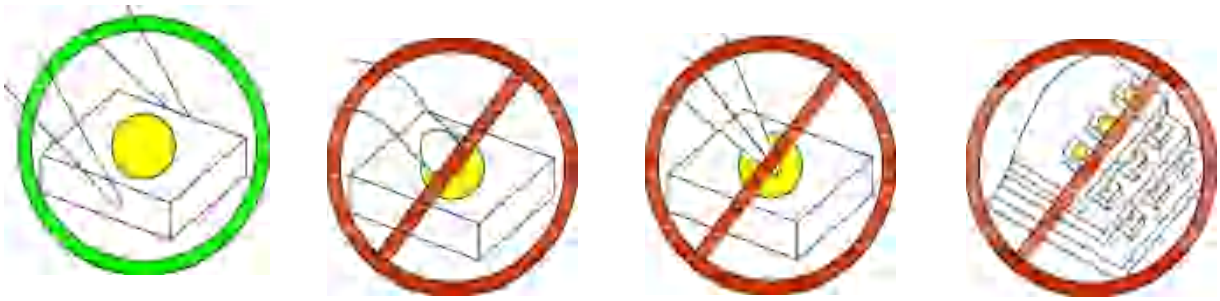
CAUTIONS

1. Handling Precautions:

1.1. Handle the component along the side surfaces by using forceps or appropriate tools.

1.2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

1.3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

2. Storage

2.1. Do not open moisture proof bag before the products are ready to use.

2.2. Before opening the package, the LEDs should be kept at 30°C or less and 60%RH or less.

2.3. The LEDs should be used within a year.

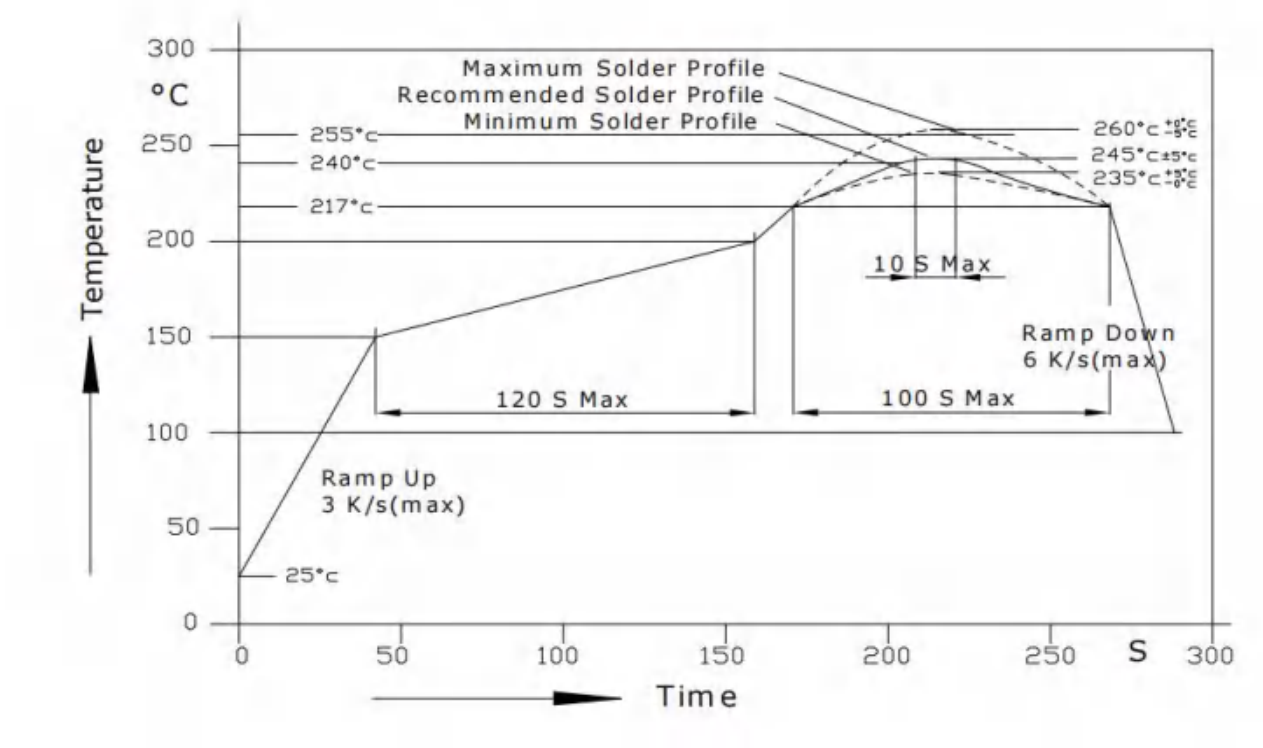
2.4. After opening the package, the LEDs should be kept at 30°C or less and 60%RH or less.

2.5. The LEDs should be used within 24 hours after opening the package.

If the moisture adsorbent material has fabled away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 65±5°C for 24 hours.

3. Soldering Condition

3.1. Pb-free solder temperature profile



3.2. Reflow soldering should not be done more than two times.

3.3. When soldering, do not put stress on the LEDs during heating.

3.4. After soldering, do not warp the circuit board.

3.5. Recommended soldering conditions:

Reflow soldering		Soldering	iron
Pre-heat	150~200°C	Temperature	300°C Max.
Pre-heat time	120 sec. Max.	Soldering time	3 sec. Max.
Peak temperature	260°C Max.		(one time only)
Soldering time	10 sec. Max.(Max. two times)		

3.6.Because different board designs use different number and types of devices, solder pastes, reflow ovens, and circuit boards, no single temperature profile works for all possible combinations.

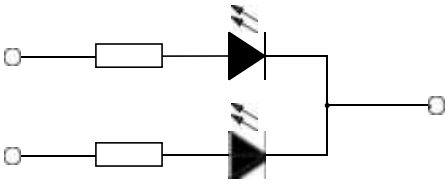
However, you can successfully mount your packages to the PCB by following the proper guidelines and PCB-specific characterization.

4. Drive Method

4.1. An LED is a current-operated device. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended that a current limiting resistor be incorporated in the drive circuit, in series with each LED as shown in Circuit A below.

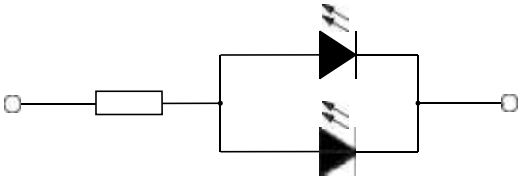
Circuit model A

LED



Circuit model B

LED



a. Recommended circuit.

b. The brightness of each LED might appear different due to the differences in the I-V characteristics of those LEDs.

5. ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Suggestions to prevent ESD damage:

- Use of a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- All devices, equipment, and machinery must be properly grounded.
- Work tables, storage racks, etc. should be properly grounded.
- Use ion blower to neutralize the static charge which might have built up on surface of the LED's plastic lens as a result of friction between LEDs during storage and handling.

ESD-damaged LEDs will exhibit abnormal characteristics such as high reverse leakage current, low forward voltage, or "no lightup" at low currents. To verify for ESD damage, check for "lightup" and Vf of the suspect LEDs at low currents. The Vf of "good" LEDs should be >2.0V@0.1mA for InGaN product and >1.4V@0.1mA for AlInGaP product.

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