

Specifications for Approval

Customer Part No.:

Inhere Part No.: S2835CPYGT-001

Part Name: 2835 黄绿光 LED

Spec Issue Date: 2019-04-01

Revision No.: A

To Customer:

We submit herewith the following information for your approval:

- Sample OQC Inspection Record LED Dimension
 Electrical Characteristics Curve Internal Circuit Diagram
 Soldering recommendation

Prepared by: Lily
Date: 2019-04-01

Checked by: Wangxian
Date: 2019-04-01

Approved by: Tom
Date: 2019-04-01

Customer Opinion

- Approve and no objection
 Reject with the following reason:



东莞市银河光电有限公司
DongGuan Inhere Opto CO.,LTD.
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TEL: 0769-23320868 FAX: 0769-23320878
E-mail: bill@inhereopto.com
Http://www.inhereopto.com

Features

2.8mm x 3.5mm LED, 0.75mm thickness

Low power consumption

Wide view angle

Package: 4000pcs/reel

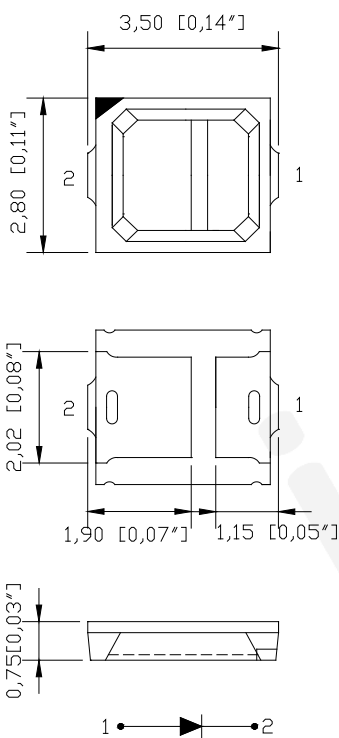
RoHS Compliant

Applications

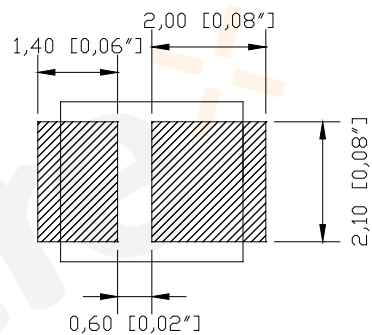
Ideal for back light and indicator

Various colors and lens types available

Package outlines



Recommend Pad Layout



Part No.	Emitted color	Dice	Lens color
S2835CPYGT-001	Yellow Green	AlGaInP	Water transparent

Notes:

All dimensions are in millimeters (inches);

Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

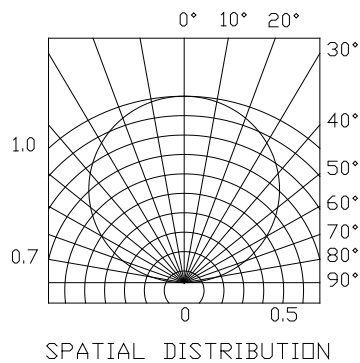
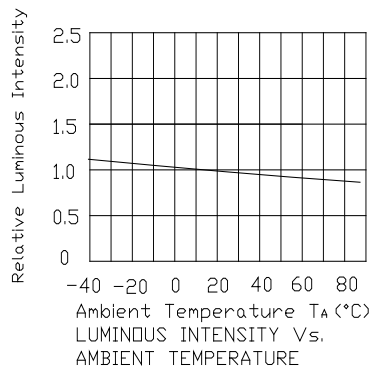
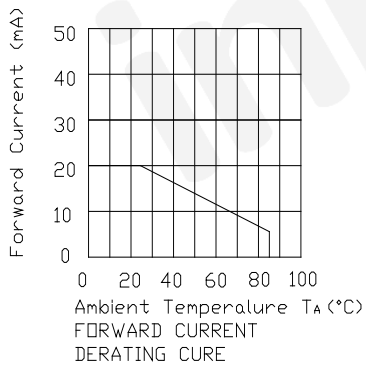
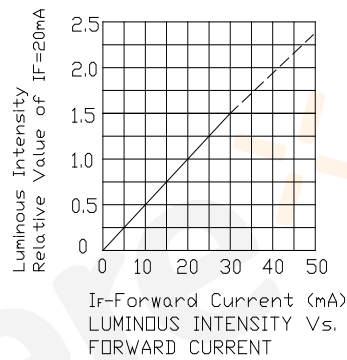
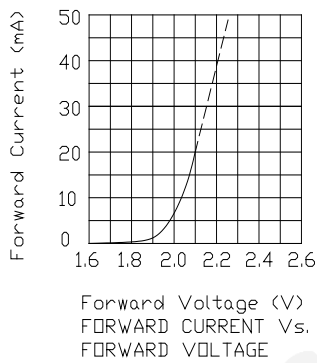
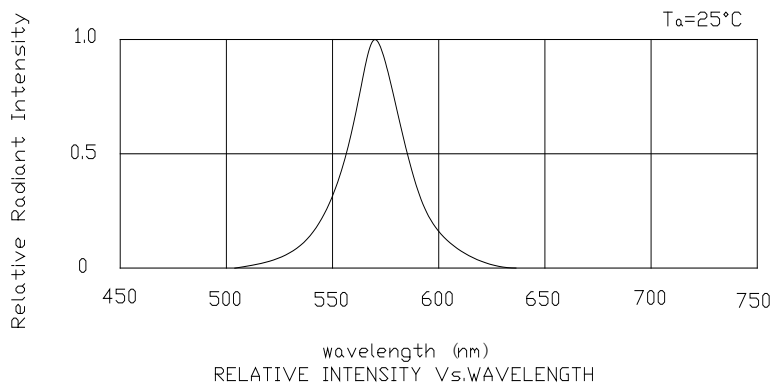
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	72	mW
Operating temperature	Top	-40 ~+85	°C
Storage temperature	Tstg	-45 ~+85	°C
Peak pulsing current (1/10 duty f=1kHz)	Ifp	125	mA

Electro-Optical Characteristics (Ta=25°C)

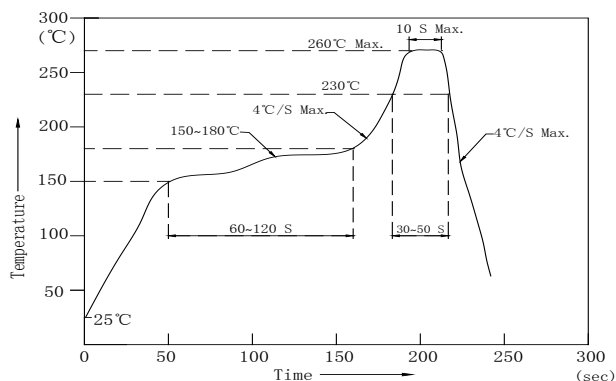
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=20mA	λ_p	--	573	--	nm
Spectral half bandwidth	If=20mA	$\Delta\lambda$	--	17	--	nm
Dominant wavelength	If=20mA	λ_d	565	--	580	nm
Forward voltage	If=20mA	Vf	1.8	--	2.4	V
Luminous intensity	If=20mA	Iv	80	110	--	mcd
Viewing angle at 50% Iv	If=20mA	2 $\theta_{1/2}$	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μ A

Optical characteristic curves



Reflow Profile

■ Reflow Temp/Time



Notes:

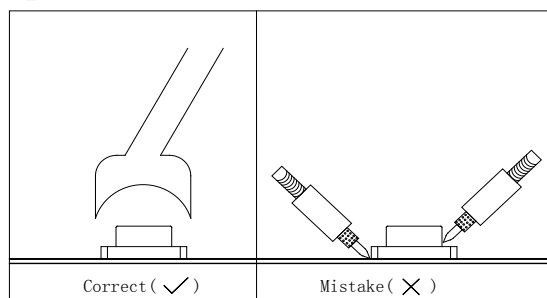
1. We recommend the reflow temperature 245°C ($\pm 5^{\circ}\text{C}$). The maximum soldering temperature should be limited to 260°C .
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering iron

Basic spec is $\leq 5\text{sec}$ when 320°C ($\pm 20^{\circ}\text{C}$). If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 350°C .

■ Rework

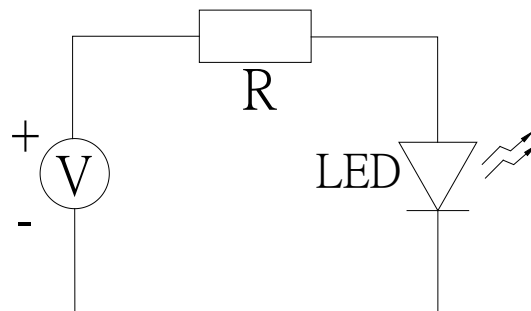
1. Customer must finish rework within 5 sec under 340°C .
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.

Test circuit and handling precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature: 5°C~30°C

2.2 Shelf life in sealed bag: 12 month at <math>< 5^{\circ}\text{C} \sim 30^{\circ}\text{C}</math> and <math>< 30\%</math> R.H. after the package is opened, the products should be used within 72hrs or they should be keeping to stored at ≤ 20 R.H. with zip-lock sealed.

3. Baking

It is recommended to baking before soldering. The Conditions is: $60 \pm 5^{\circ}\text{C}/24\text{hrs}$.

Test Items and Results of Reliability

Test Item	Test Conditions	Standard Test Method	Note	Number of Test
Reflow Soldering	Ta=260±5℃,Time=10±2S	JB/T 10845-2008	3times	0/22
Salt Atmosphere	Ta=35±3℃,PH=6.5~7.2	GB/T 2423.17-2008	24hrs	0/22
Temperature Cycling	-40±5℃ 30±1min ↑→(25℃/5±1min)↓ 100±5℃ 30±1min	GB/T 2423.22-2012	100cycles	0/22
Thermal Shock	Ta=-40±5℃~100±5℃, 15±1min dwell	GB/T 2423.22-2012	100cycles	0/22
High Humidity High Temp. Cycling	Ta=30±5℃~65±5℃, 90±5%RH,24hrs/1cycle	GB/T 2423.4-2008	10cycles	0/22
High Humidity High Temp. Storage Life	Ta=85±5℃,ψ(%)=85±5%RH	GB/T 2423.3-2006	1000hrs	0/22
High Temperature Storage Life	Ta=100±5℃,non-operating	GB/T 2423.2-2008	1000hrs	0/22
Low Temperature Storage Life	Ta=-40±5℃,non-operating	GB/T 2423.1-2008	1000hrs	0/22
Life Test	Ta=26±5℃,@20mA, ψ(%)=25%RH~55%RH	--	1000hrs	0/22
High Humidity High Temp. Operating Life	Ta=85±5℃,@20mA, ψ(%)=85%RH	GB/T 2423.3-2006	500hrs	0/22
Low Temperature Operating Life	Ta=-20±5℃,@20mA	GB/T 2423.1-2008	1000hrs	0/22

Forward Voltage Rank Combination (IF=20mA)

Rank	Min.	Max.	Unit
12	1.8	2.0	V
14	2.0	2.2	
16	2.2	2.4	

Luminous intensity Rank Combination (IF=20mA)

Rank	Min.	Max.	Unit
I	80	100	mcd
J	100	125	
K	125	160	
L	160	200	
M	200	--	

Dominant wavelength Rank Combination (IF=20mA)

Rank	Min.	Max.	Unit
h	565	568	nm
i	568	572	
j	572	576	
k	576	580	

Group Name on Label (Example DATA: 14 J i 20)

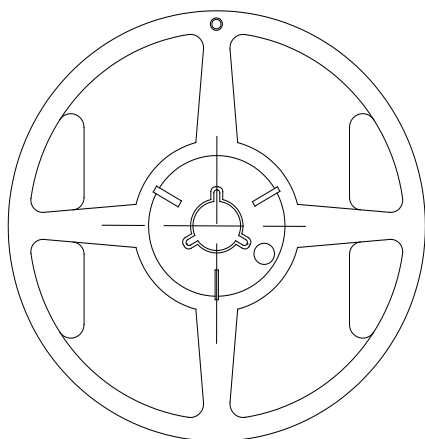
DATA: 14 J i 20	Vf(V)	Iv(mcd)	λ_d (nm)	Test Condition
14→J→i→20	2.0~2.2	100~125	568~572	IF=20mA

Notes:

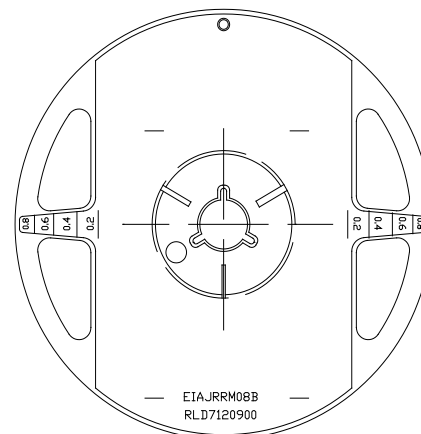
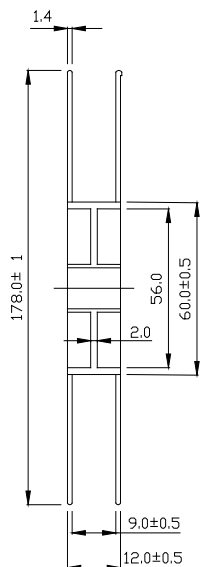
- 1.The tolerance of luminous intensity (Iv)is $\pm 15\%$.
2. The tolerance of dominant wavelength is $\pm 1\text{nm}$.
3. This specification is preliminary.
4. This specification is a standard specification of our factory, can make in accordance with customer's special requirement.

2835 Series SMD Top LED Lamps Packaging Specifications

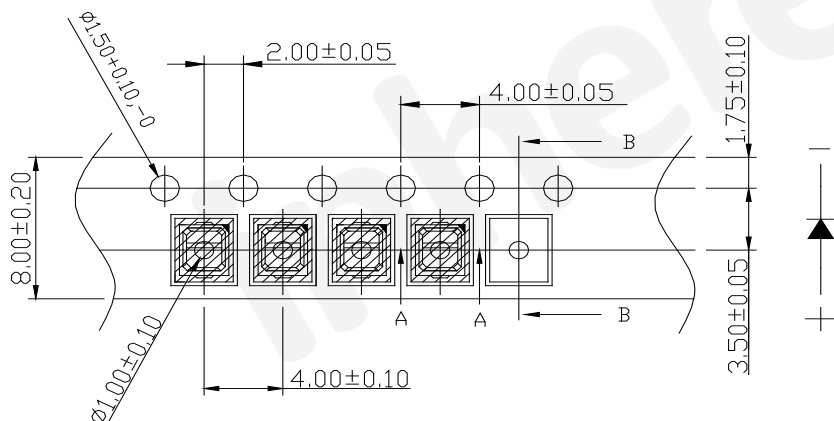
- Feeding Direction



- Dimensions of Reel (Unit: mm)



- Dimensions of Tape (Unit: mm)



Notes:

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
4. 4,000pcs/Reel.

