

# Specifications for Approval

Customer Part No.:

JOINHANDS Part No.: JH-CB65M10SEP201

Part Name:2106 冰蓝光 LED

Spec Issue Date:2019-01-08

Revision No.: A0

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To Customer:

1. Accessory: Samples  Samples Data
2. Customer's Proposal :Agree Disagree

Reason :

Draw by :	Checked by :	Approved by :
李飞	卢伟昌	钟志鸿
Customer Approve		



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## Features

2.1mm × 0.6mm SMD LED, 1.0mm thickness

Low power consumption

Wide view angle

Package: 4000pcs/reel

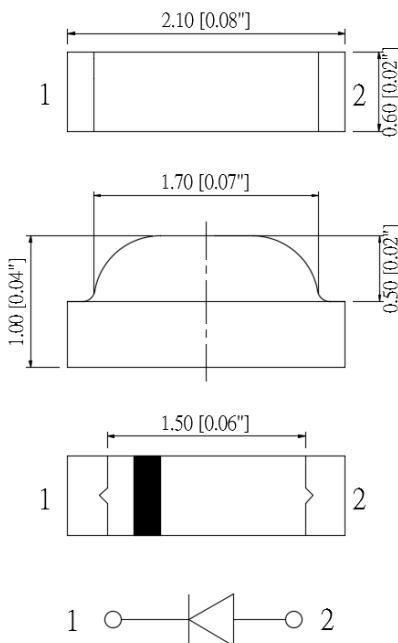
RoHS Compliant

## Applications

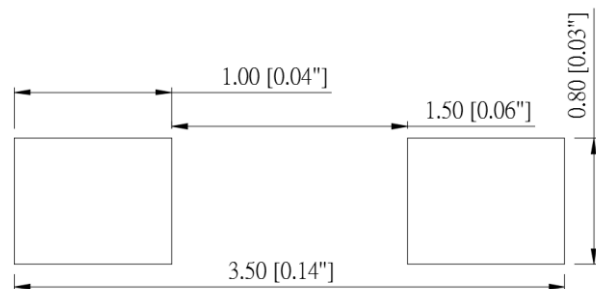
Ideal for back light and indicator

Various colors and lens types available

## Package outlines



## Recommend Pad Layout



Part No.	Emitted color	Dice	Lens color
JH-CB65M10SEP201	ICE BLUE	InGaN/GaN	Green diffused

## 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)

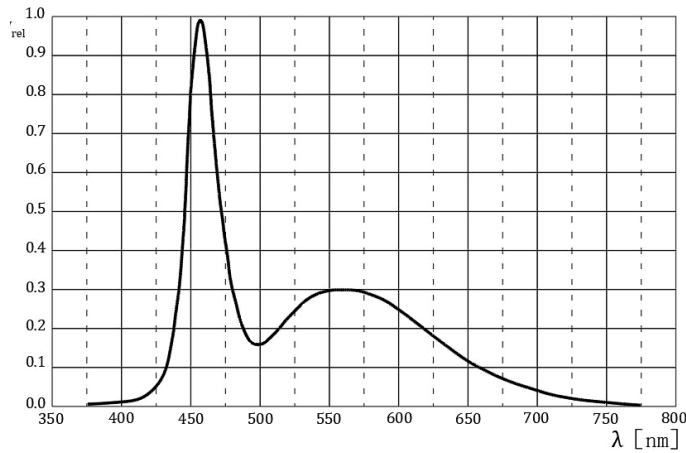
Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	102	mW
Operating temperature	Top	-40 ~+80	°C
Storage temperature	Tstg	-40 ~+85	°C
Peak pulsing current (1/8 duty f=1kHz)	Ifp	125	mA

### Electro-Optical Characteristics (Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
CIE Coordinates	If=5mA	X	--	0.15	--	--
		Y	--	0.245	--	--
Forward voltage	If=5mA	Vf	2.5	--	3.4	V
Luminous intensity	If=5mA	Iv	50	90	160	mcd
Viewing angle at 50% Iv	If=10mA	2θ1/2	--	150	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

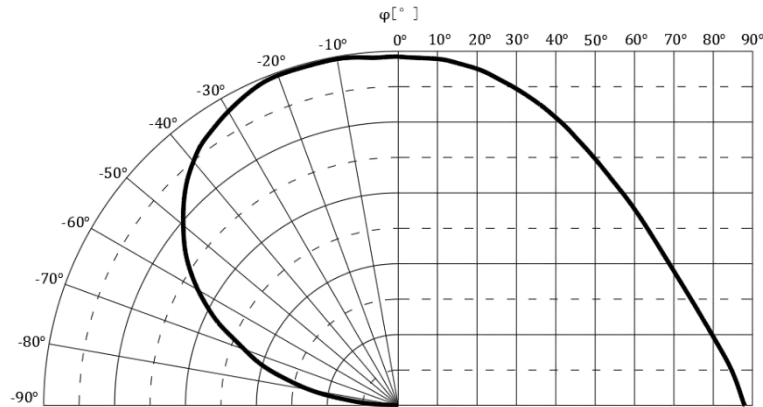
**Relative Spectral Emission**

IF=20mA, Ta=25°C



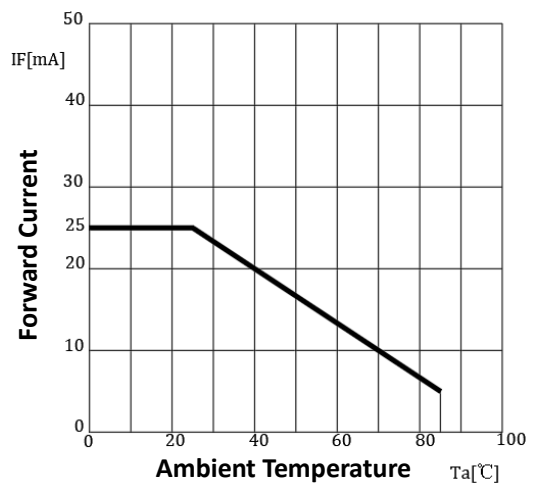
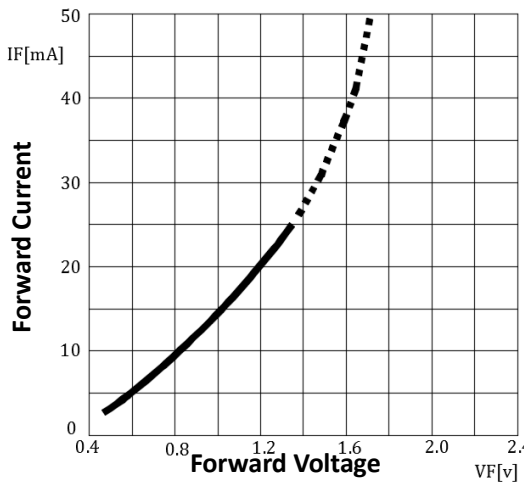
**Radiation Characteristics**

IF=10mA, Ta=25°C



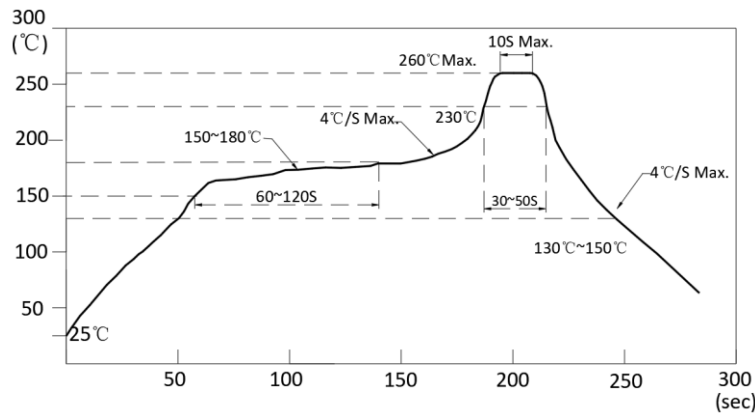
**Forward Current vs Forward Voltage Forward Current Derating Curve**

Ta=25°C



**Reflow Profile**

■ Reflow Temp/Time



**Notes:**

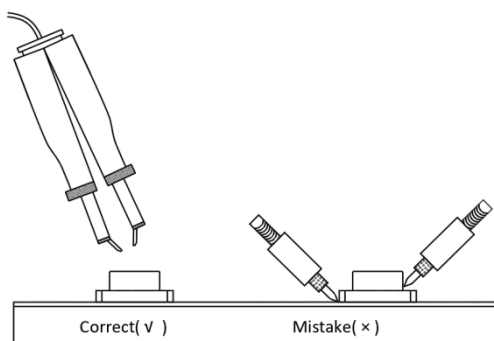
1. We recommend the reflow temperature 245°C(±5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering iron

Basic spec is ≤ 5sec when 320°C(±20°C). If temperature is higher, time should be shorter(+10°C → -1sec). Powerdissipation of iron should be smaller than 20W, and temperatures should be controllable .Surface temperature of the device should be under 350°C.

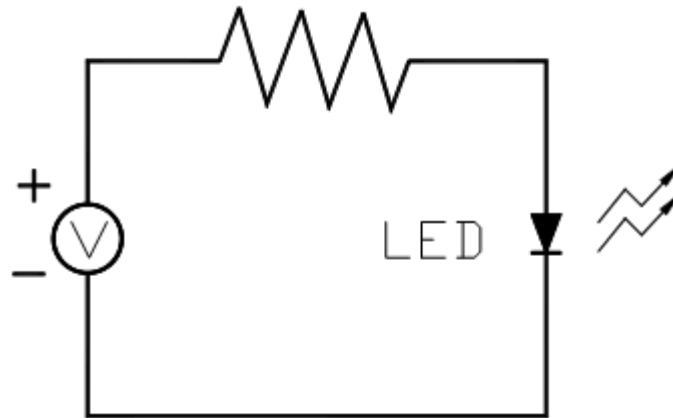
■ Rework

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**



**Handling precautions**

1. Over-current-proof

2. Shelf life in sealed bag: 12 month at 5°C~30°C and <60% R.H;

3. After the package is Opened:

3.1. It is recommended to baking before the first use:

Baking condition:

a.  $60 \pm 5^\circ\text{C}$  x (24~48hrs) and <5%RH, taped reel type;

b.  $110 \pm 5^\circ\text{C}$  x (8~16hr), bulk type;

3.2.The products should be used within a week and to be stored at  $\cong 20\%$  R.H. with zip-lock sealed:

a. Baking is required before soldering when the pack is unsealed after 24hrs;

b. Baking condition as 3.1 baking condition.

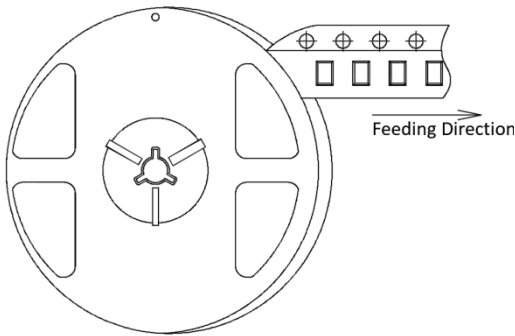
## Test Items and Results of Reliability

Test Item	Test Conditions	Standard Test Method	Note	Number of Test
Temperature Cycle	-20℃ 30min ↑ ↓ 80℃ 30min	100 cycle	0/22	Temperature Cycle
Thermal Shock	-20℃ 15min ↑ ↓ 80℃ 15min	100 cycle	0/22	Thermal Shock
High Humidity Heat Cycle	30℃ ↔ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/22	High Humidity Heat Cycle
High Temperature Storage	T <sub>a</sub> =80℃	1000 hrs	0/22	High Temperature Storage
Humidity Heat Storage	T <sub>a</sub> =60℃ RH=90%	1000 hrs	0/22	Humidity Heat Storage
Low Temperature Storage	T <sub>a</sub> =-30℃	1000 hrs	0/22	Low Temperature Storage
Temperature Cycle	-20℃ 30min ↑ ↓ 80℃ 30min	100 cycle	0/22	Temperature Cycle
Thermal Shock	-20℃ 15min ↑ ↓ 80℃ 15min	100 cycle	0/22	Thermal Shock
Life Test	T <sub>a</sub> =25℃ I <sub>F</sub> =20mA	1000 hrs	0/22	Life Test
High Humidity Heat Life Test	60℃ RH=90% I <sub>F</sub> =10mA	500 hrs	0/22	High Humidity Heat Life Test

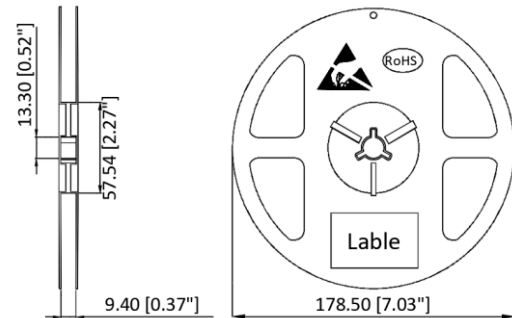
Low Temperature Life Test	$T_a = -20^{\circ}\text{C}$ $I_f = 20\text{mA}$	1000 hrs	0/22	Low Temperature Life Test
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**2106 Series SMD Chip LED Lamps Packaging Specifications**

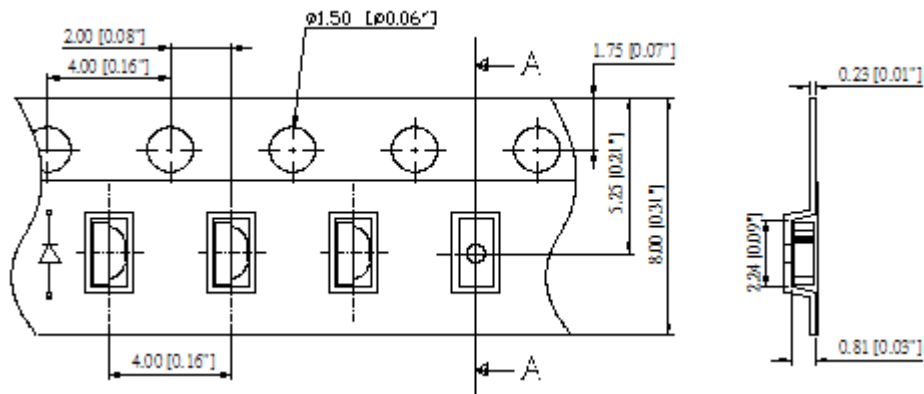
● **Feeding Direction**



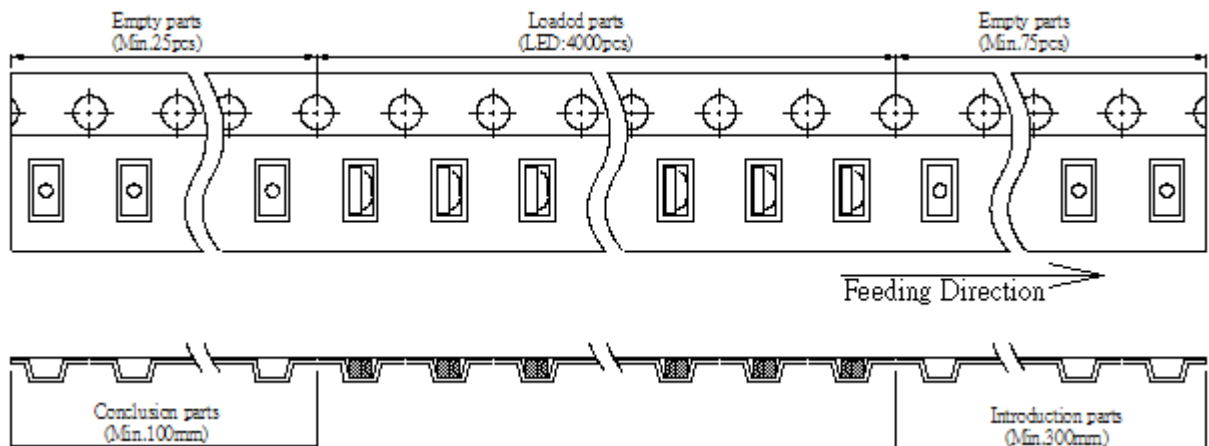
● **Dimensions of Reel (Unit: mm)**



● **Dimensions of Tape (Unit: mm)**



● **Arrangement of Tape**



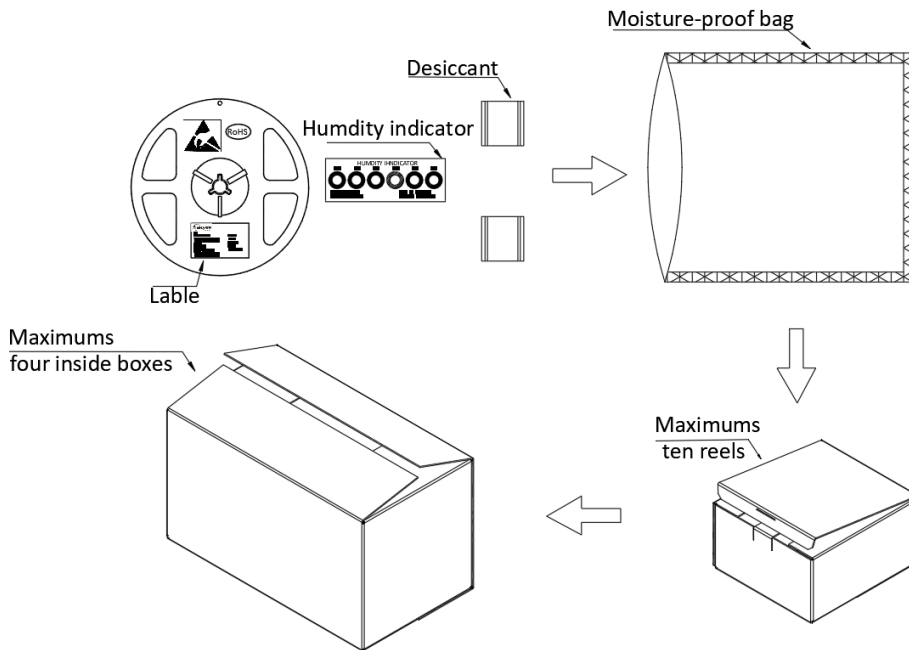


Notes:

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.

**2106Series SMD Chip LED Lamps Packaging Specifications**

● **Transportation Packing**



Notes:

Reeled products (numbers of products are 4,000pcs) packed in a seal off moisture-proof bag along with two desiccant one by one, ten moisture-proof bag of maximums packed in an inside box (about size: 240x 220x 120mm) and four inside boxes of maximums are put in the outside box (about size: 460mm x 246mm x 250mm) Together with buffer material, and it is packed. The number of the loading steps of outsidebox (cardboard box) has it to three steps.