Features

- Extremely wide viewing angle.
- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Moisture sensitivity level: Level 4.
- Package:4500pcs/reel..
- RoHS compliant.

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

注意：操作时应注意静电敏感

释放设备装置

Description

The Green source color devices are made with InGaN on Substrate Light Emitting Diode

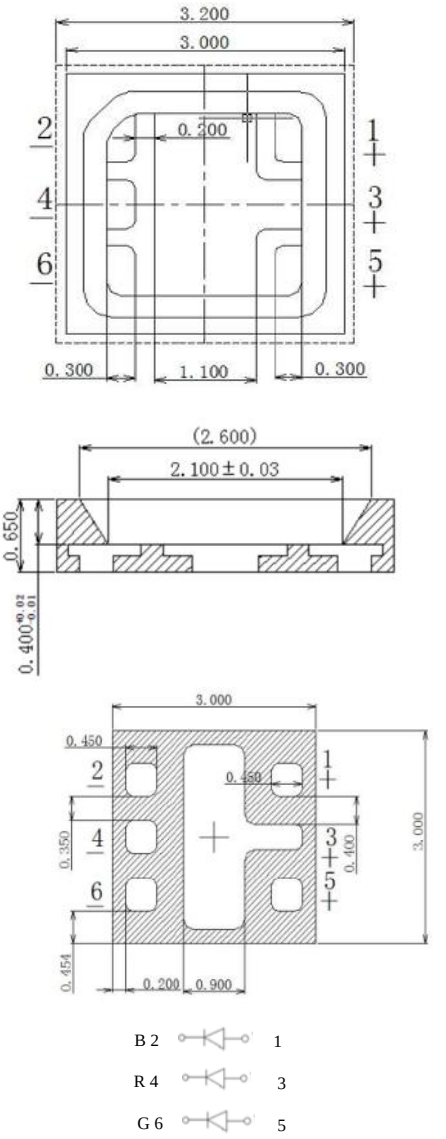
The Red source color devices are made with AlGaInP on Substrate Light Emitting Diode

The Blue source color devices are made with InGaN on Substrate Light Emitting Diode

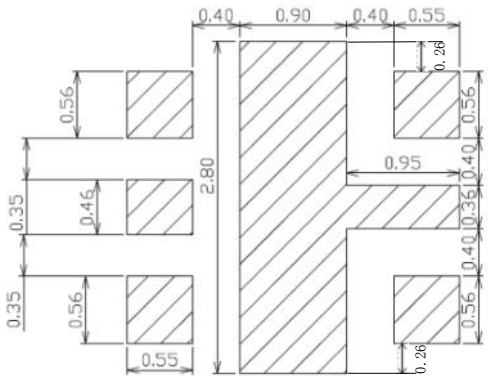
Applications

- Decorative lighting

Package Dimensions



Recommended Soldering Pattern



Notes:

1. All dimension units are millimeters.

2.All dimension tolerance is ± 0.15mm unless otherwise noted.

Selection Guide

Part No.	Dice	Lens Type 型	Luminous flux (150 mA)		Viewing Angle
			Min.	Max.	2q1/2
CL-SFC3030RGB-02	Blue(InGaN)	Water Clear	8	13	120°
	Green(InGaN)	Water Clear	36	41	
	Red(AlGaInP)	Water Clear	18	23	

Note:
1. 2θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2. The above luminous intensity measurement allowance tolerance is ± 10%. 上

Electrical / Optical Characteristics at Ta=25° C

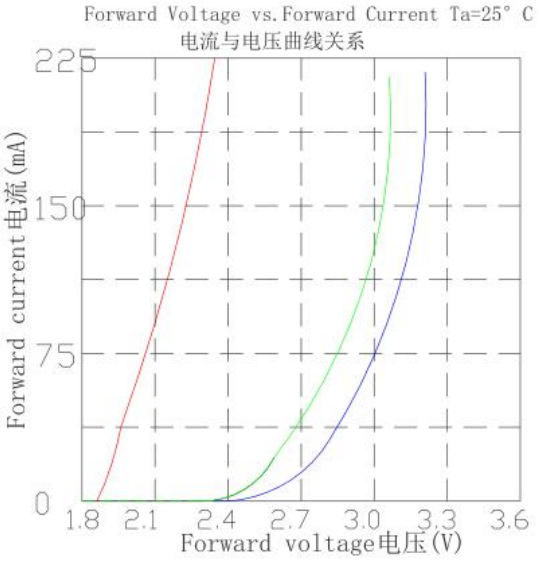
Parameter	Symbol	Blue			Green			Red			Units	Test Condi-tions
		Min.	Typ.	Max	Min.	Typ.	Max	Min.	Typ.	Max		
Forward Voltage	VF	2.8	- -	3.4	2.8	- -	3.4	2.0	- -	2.6	V	IF=150mA
Dominate Wave-length	Λd	450	- -	460	520	- -	530	620	- -	630	nm	IF=150mA

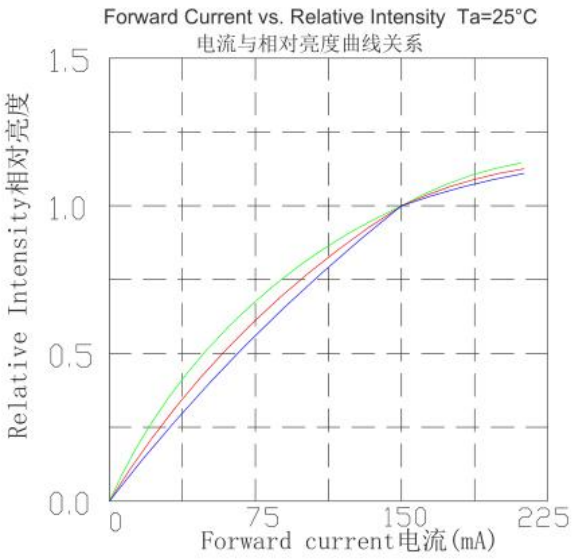
Absolute Maximum Ratings at Ta=25°C

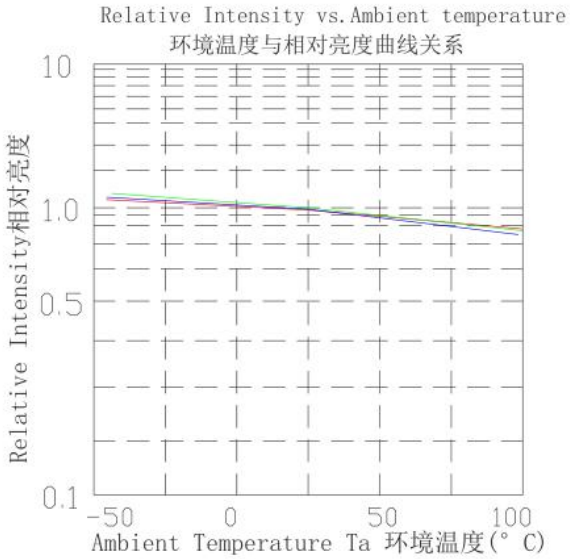
Parameter	Symbol	Value	Value	Value	Units
Power Dissipation	Pd	468	612	612	mW
Forward Current	I_F	180	180	180	mA
Reverse Voltage	V_R	5	5	5	V
Electrostatic Discharge (HBM)	ESD	2000	2000	2000	V
TS Temperature	TS	105			°C
Storage Temperature	Tstg	-40 ~ +100			°C
Junction Temperature	Tj	125			°C

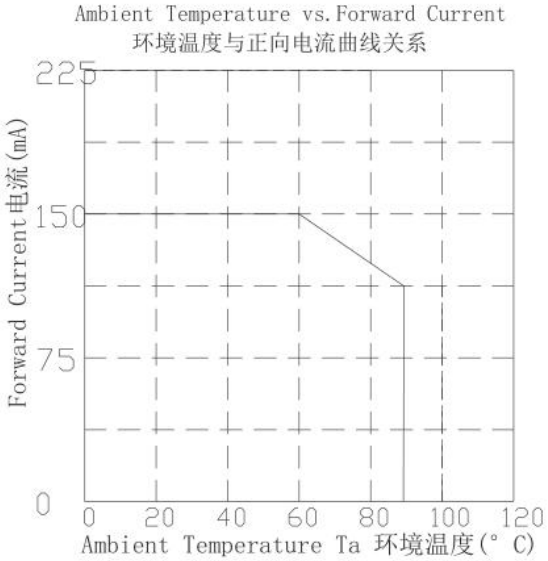
Note:
1. 1/10 Duty cycle, 0.1ms pulse width.
2. The above forward voltage measurement allowance tolerance is ±0.1V.
3. The above wavelength measurement allowance tolerance is ±1nm.

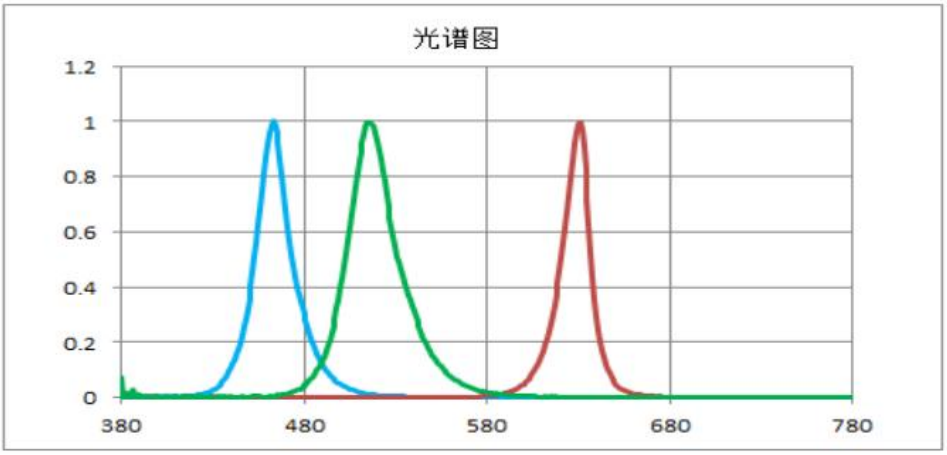
Typical optical characteristics curves





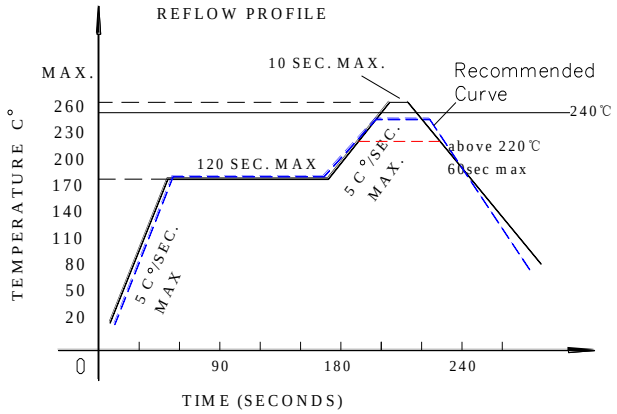






SMT Reflow Soldering Instructions

(Product is highest resistant to 260℃ reflow but suggested the highest temperature of 240℃ within)



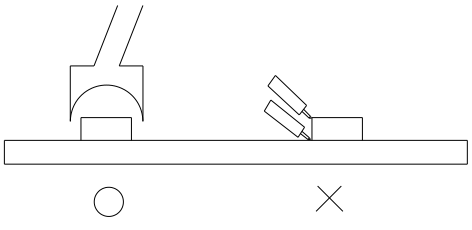
1.Reflow soldering should not be done more than three times.
2.When soldering , do not put stress on the LEDs during heating

Soldering iron

1.When hand soldering, keep the temperature of iron below less 350℃ less than 5seconds
2.The hand solder should be done only one times

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed in advance whether the characteristics of LEDs will or will not be damaged by repairing.



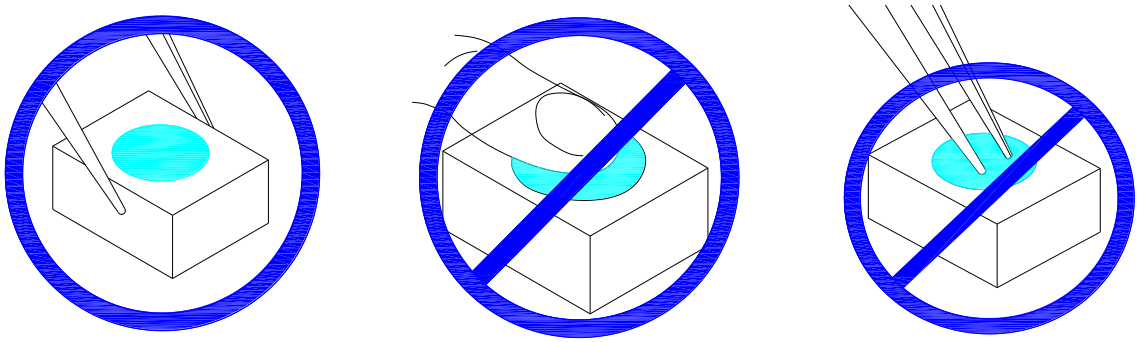
Cautions

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

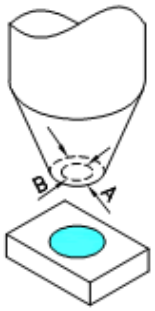
Handling Precautions

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

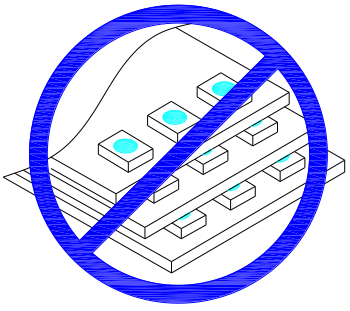
1.Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.



2.The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



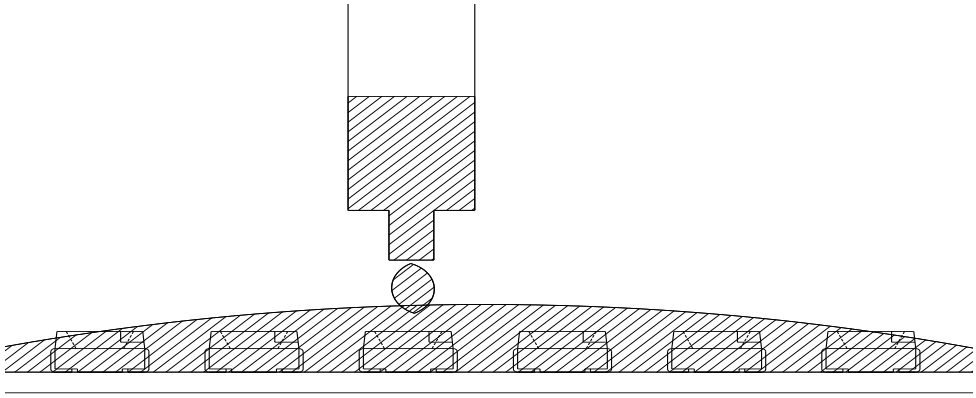
3.Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage the internal circuitry



4.Not suitable to operate in acidic environment, PH<7

5.LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.

6.When we need to use external glue for LED application products, please make sure that the external glue matches the LED packaging glue. Additionally ,as most of LED packaging glue is silica gel, and it has strong Oxygen permeability as well as strong moisture permeability; in order to prevent external material from getting into the inside of LED, which may cause the malfunction of LED, the single content of Bromine element is required to be less than 900PPM,the single content of Chlorine element is required to be less than 900PPM,the total content of Bromine element and Chlorine element in the external glue of the application products is required to be less than 1500PPM



7.Other points for attention, please refer to our LED user manual，In accordance with the user manual, the product shelf life is 24 months，If there is a warranty agreement, the warranty agreement shall prevail

Label

IV: Luminous intensity rank

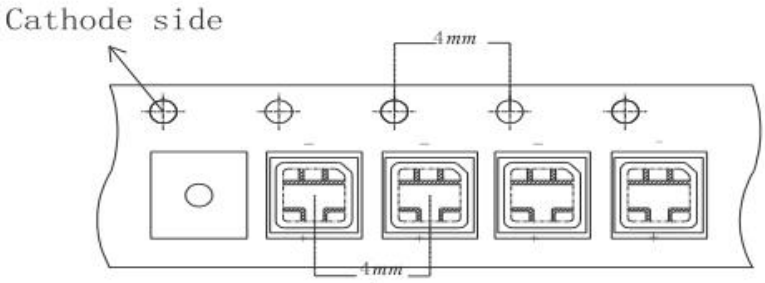
WD: Dominate Wavelength

VF: Forward voltage rank

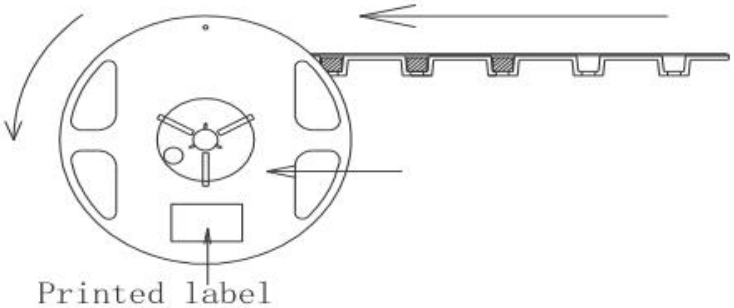
QTY:

Tape Specifications

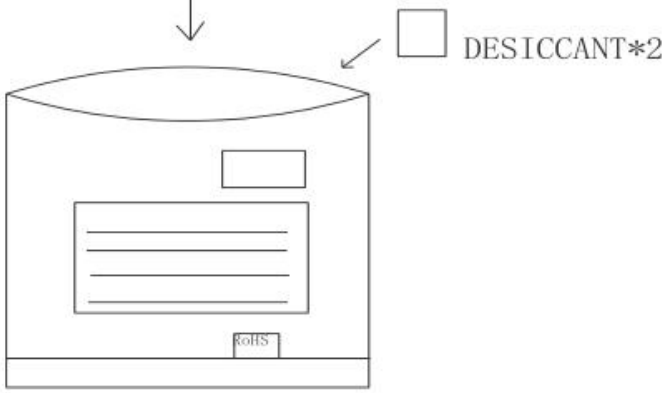
(Units : mm)



Reel Dimensions



Moisture Resistant Packaging



Note: The tolerances unless mentioned is ± 0.1mm , Unit: mm