



## Data Sheet

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Customer: \_\_\_\_\_

Part No: \_\_\_\_\_

CL-SP172RIRY-630,850-02(Y)

Sample No: \_\_\_\_\_

Description: \_\_\_\_\_

Item No: \_\_\_\_\_

Customer			
Check	Inspection	Approval	Date

**2.0X1.25mm SMD CHIP LED LAMP**


ATTENTION  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE DEVICES

**Features**

- \_2.0mmx1.25mm SMT LED,0.80mm THICKNESS.
- \_LOW POWER CONSUMPTION.
- \_WIDE VIEWING ANGLE.
- \_IDEAL FOR BACKLIGHT AND INDICATOR.
- \_VARIOUS COLORS AND LENS TYPES AVAILABLE.
- \_PACKAGE : 3000PCS / REEL.
- \_RoHS COMPLIANT.

**Description**

The Blue source color devices are made with GaN on Sapphire Light Emitting Diode.

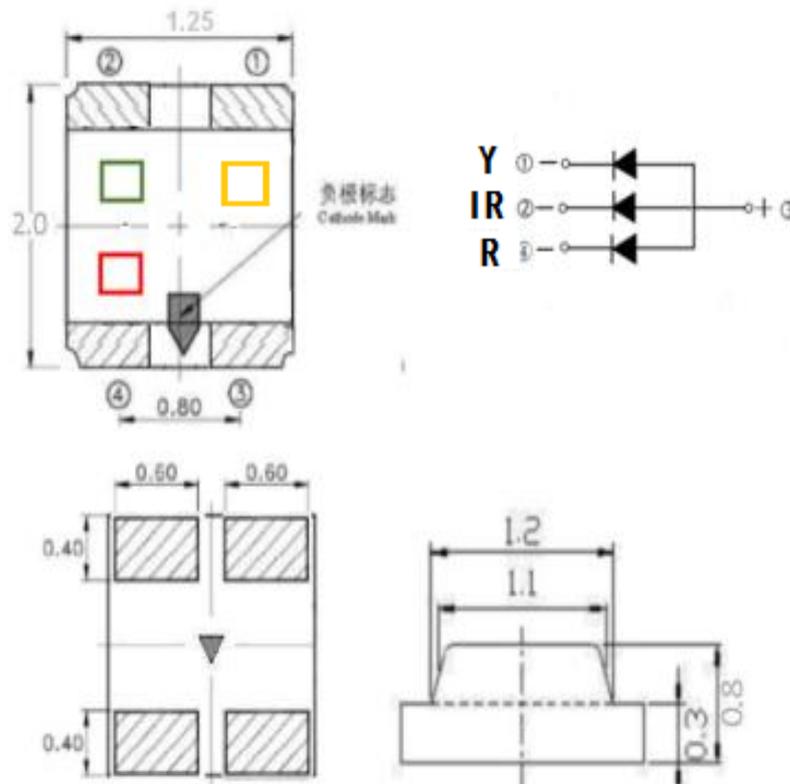
The Green source color devices are made with InGaN on SiC Light Emitting Diode.

The Hyper Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

**Package Dimensions**

**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1$  (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

**Selection Guide**

Part No.	Dice	Lens Type	Iv (mcd/mw) @ 20mA		Viewing Angle
			Min.	MAX.	2 θ 1/2
<b>CL-SP172RIRY -630,850-02(Y)</b>	RED (InGaAlP)	<b>WATER CLEAR</b>	<b>100</b>	<b>200</b>	120
	IR		<b>2</b>	<b>10</b>	
	Yellow		<b>120</b>	<b>250</b>	

Note:

1.  $\theta$  1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

**Electrical / Optical Characteristics at TA=25°C**

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Red IR Yellow			nm	IF=20mA
$\lambda_D$	Dominant Wavelength	Red IR Yellow	<b>620</b> <b>850</b> <b>586</b>	<b>630</b> <b>594</b>	nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Half-width	Red IR Yellow	<b>20</b> <b>25</b>		nm	IF=20mA
<b>C</b>	Capacitance	Red IR Yellow	<b>70</b> <b>45</b>		pF	VF=0V;f=1MHz
<b>VF</b>	Forward Voltage	Red IR Yellow	<b>1.9</b> <b>1.4</b> <b>1.8</b>	<b>2.3</b> <b>1.8</b> <b>2.3</b>	V	IF=20mA
<b>IR</b>	Reverse Current	Red IR Yellow		<b>5</b> <b>5</b> <b>5</b>	uA	VR = 5V

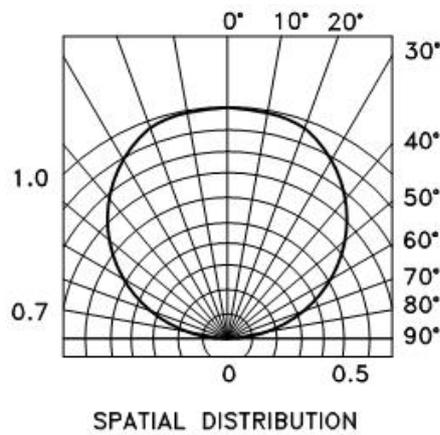
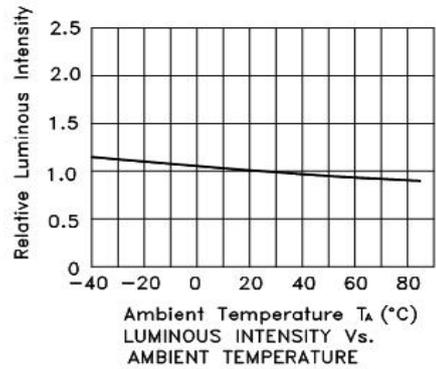
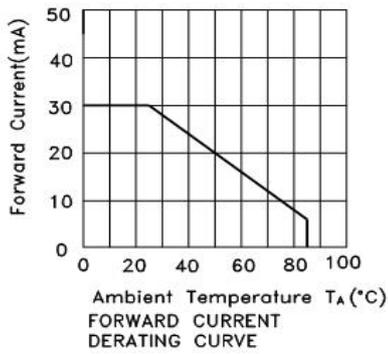
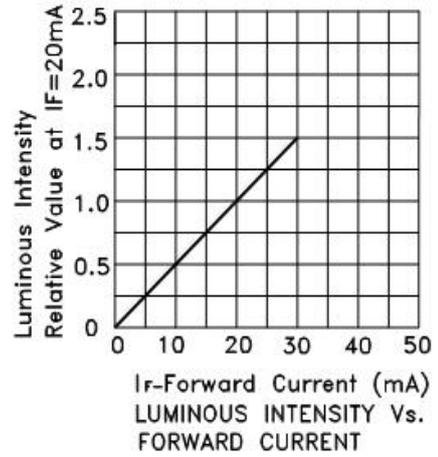
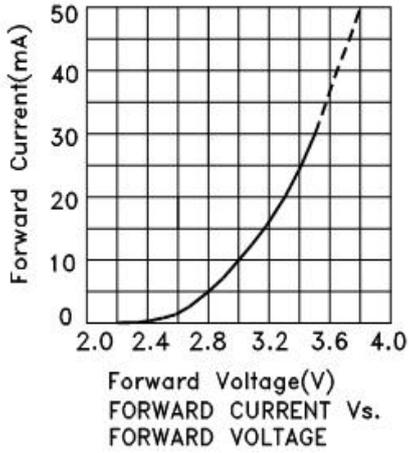
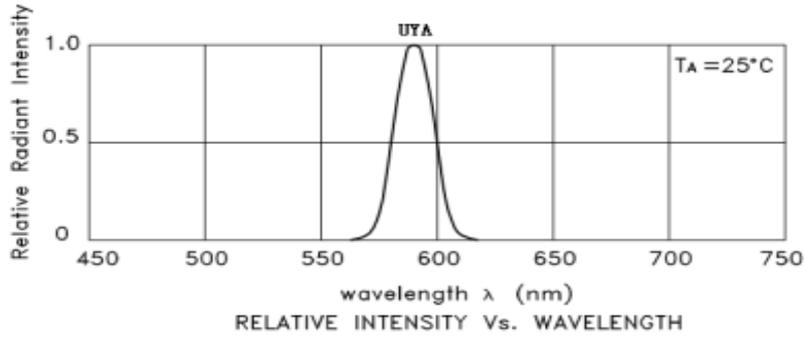
**Absolute Maximum Ratings at TA=25°C**

Parameter	Red	IR	Yellow	Units
Power dissipation	<b>75</b>	<b>200</b>	<b>75</b>	<b>mW</b>
DC Forward Current	<b>30</b>	<b>20</b>	<b>30</b>	<b>mA</b>
Peak Forward Current [1]	<b>140</b>	<b>20</b>	<b>80</b>	<b>mA</b>
Reverse Voltage	<b>5</b>	<b>5</b>	<b>5</b>	<b>V</b>
Operating/Storage Temperature	<b>-40°C To +80°C</b>			

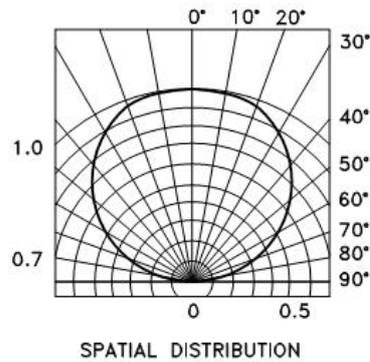
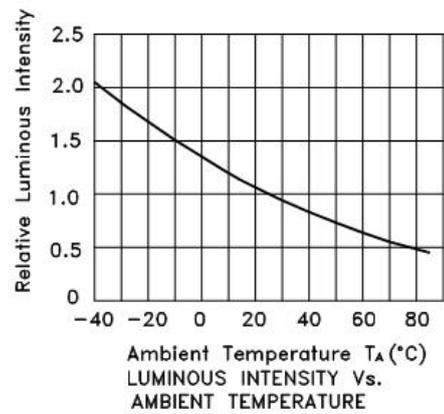
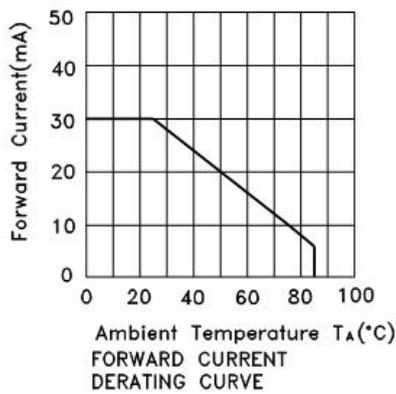
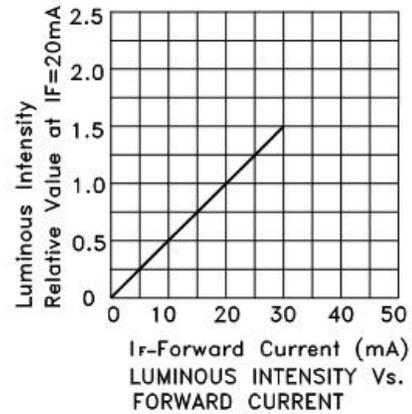
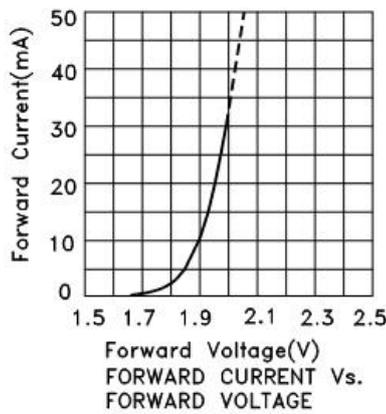
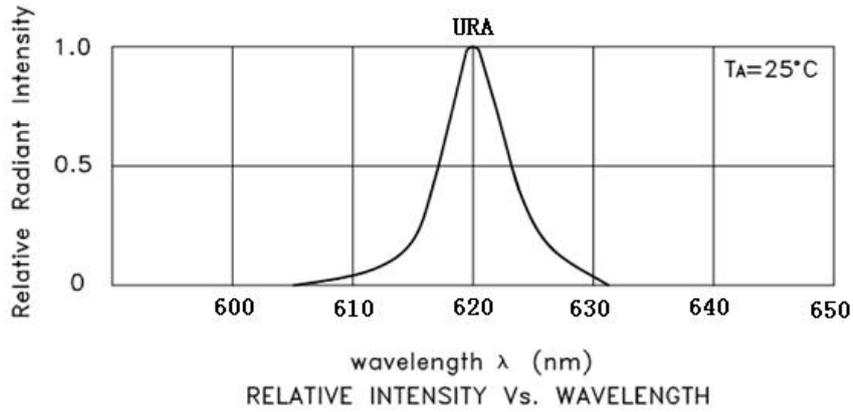
Note:

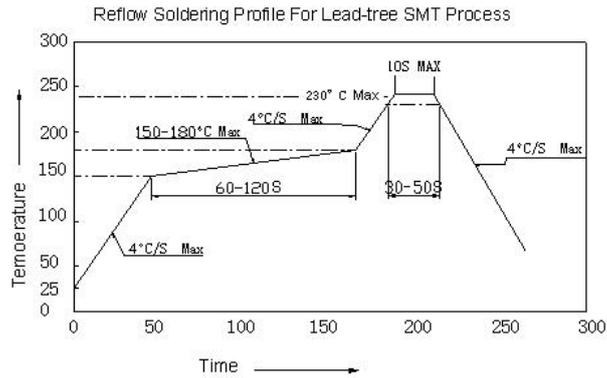
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Yellow



Red





**NOTES:**

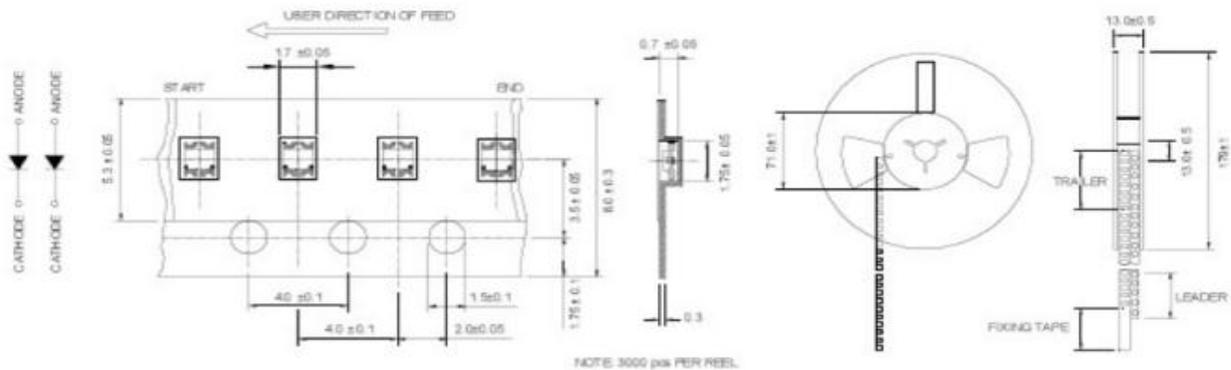
1. We recommend the reflow temperature 245° c(± 5) The maximum soldering temperature should be limited to 280° c
2. Don't cause stress too the epoxy resin while it is exposed to high temperature.
3. Numbe of reflow process shall be 2 time or less.

**Recommended Soldering Pattern**

(Units : mm)

**PACKING: 4000 pcs/REEL**

**● Tapping and packaging specifications(Units: mm)**



1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.