

**Technical Data Sheet****Power Top View LED (Preliminary)**

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**67-31B UYC/A10/TR8****Features**

- PLCC-4 package.
- High flux output.
- High current capability.
- White package.
- Optical indicator.
- Colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector.
- Suitable for automatic placement equipment.
- Suitable for reflow and wave solder processes.
- Available on tape and reel (8mm Tape).
- Pb free

**Descriptions**

The 67-41B series is available in soft orange, red and yellow. Due to the package design, the LED has optimized light coupling by inter reflector.

This feature makes the LED ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

**Applications**

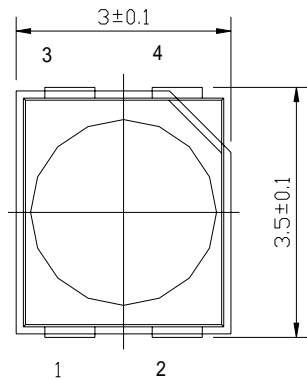
- Automotive: interior and exterior lighting.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

**Device Selection Guide**

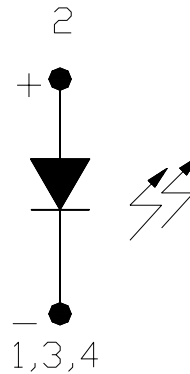
<b>Chip</b>		<b>Lens Color</b>
<b>Material</b>	<b>Emitted Color</b>	
AllnGaP	Super Yellow	Water Clear

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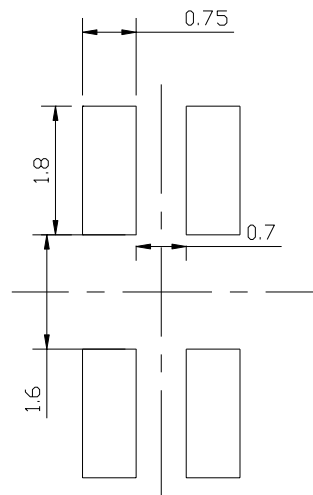
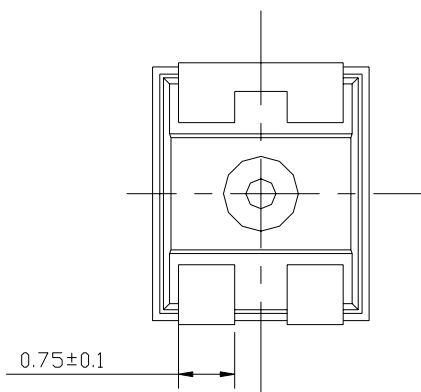
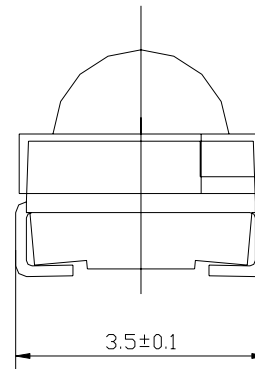
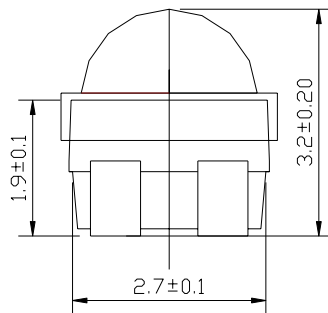
**Package Dimensions**



1,3,4 – Cathode  
2 – Anode



Polarity



**Note:** The tolerances unless mentioned is  $\pm 0.1\text{mm}$  ,Unit = mm

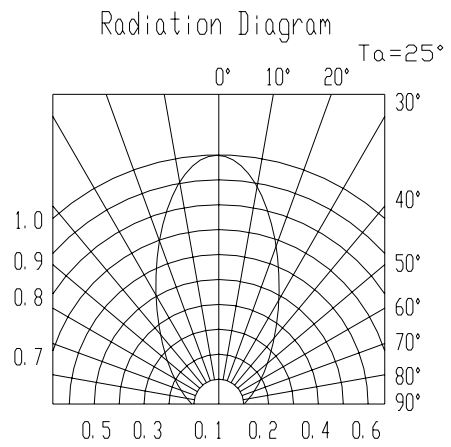
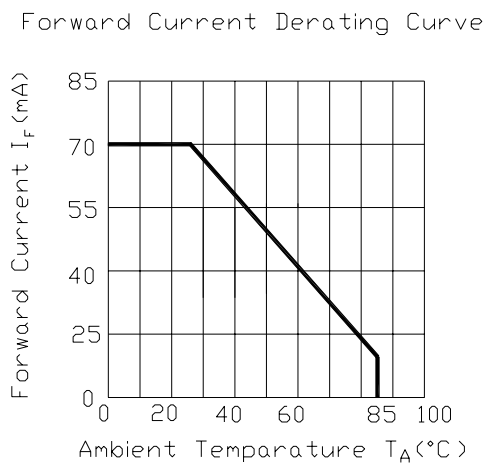
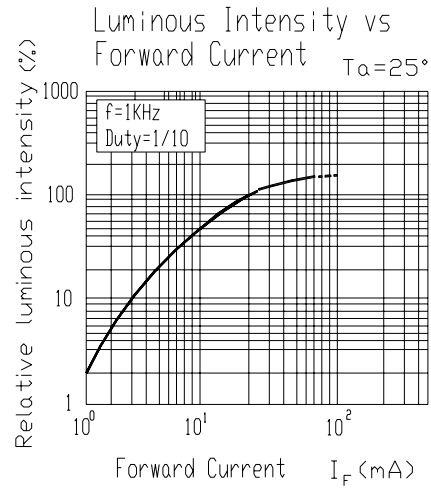
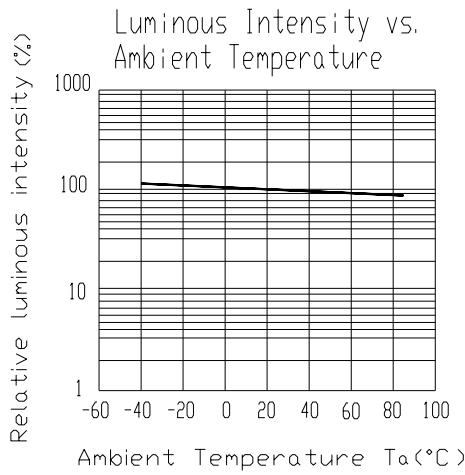
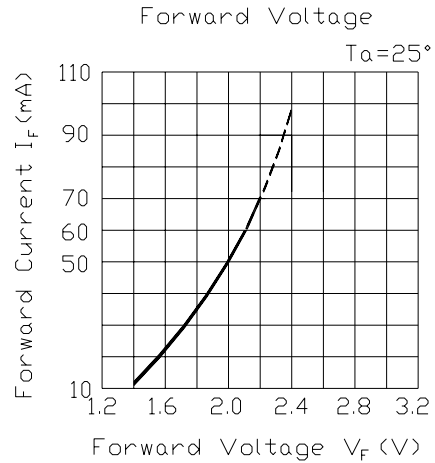
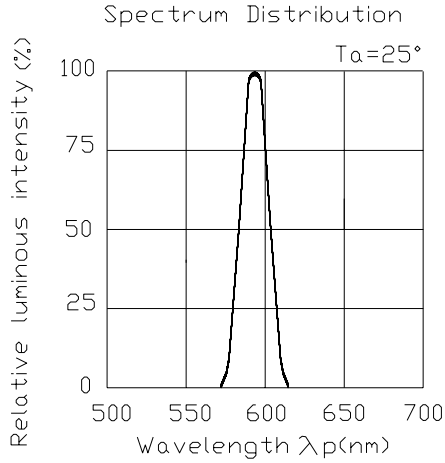
**Absolute Maximum Ratings (T<sub>A</sub>=25 )**

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	70	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	
Storage Temperature	T <sub>stg</sub>	-40 ~ +90	
Electrostatic Discharge(HBM)	ESD	2000	V
Power Dissipation	P <sub>d</sub>	200	mW
Peak Forward Current (Duty 1/10 @1KHz)	I <sub>FP</sub>	200	mA
Soldering Temperature	T <sub>sol</sub>	Reflow Soldering : 260 Hand Soldering : 350	for 10 sec. for 3 sec.

**Electronic Optical Characteristics (T<sub>A</sub>=25 ) :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I <sub>v</sub>	1400	1800	-----	mcd	IF=50mA
Viewing Angle	2 <sub>1/2</sub>	-----	60	-----	deg	IF=50mA
Peak Wavelength	λ <sub>p</sub>	-----	591	-----	nm	IF=50mA
Dominant Wavelength	λ <sub>D</sub>	-----	589	-----	nm	IF=50mA
Spectrum Radiation Bandwidth		-----	20	-----	nm	IF=50mA
Forward Voltage	V <sub>F</sub>	-----	2.0	2.5	V	IF=50mA
Reverse Current	I <sub>R</sub>	-----	-----	10	μA	V <sub>R</sub> =5V

**Typical Electro-Optical Characteristics Curves**



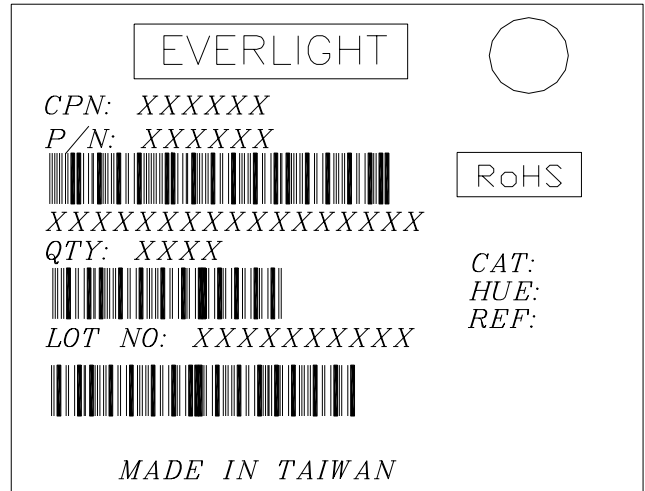
**67-31B UYC/A10/TR8**

**Label explanation**

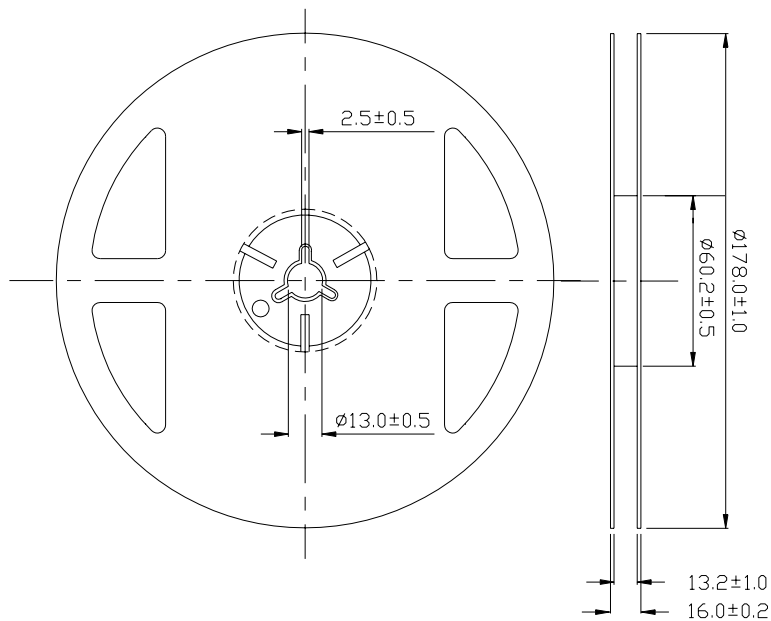
**CAT: Luminous Intensity Rank**

**HUE: Dom. Wavelength Rank**

**REF: Forward Voltage Rank**



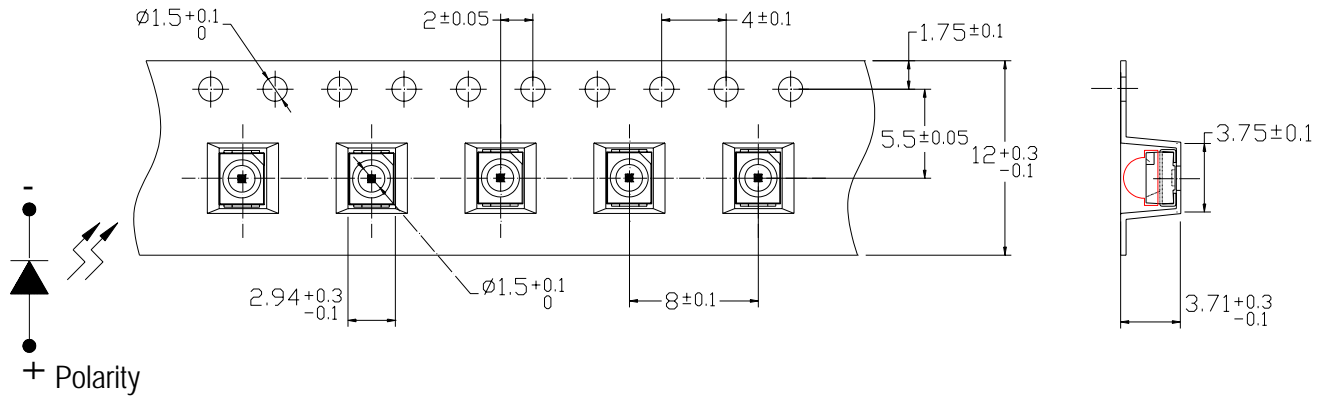
**Reel Dimensions**



**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm ,Unit = mm

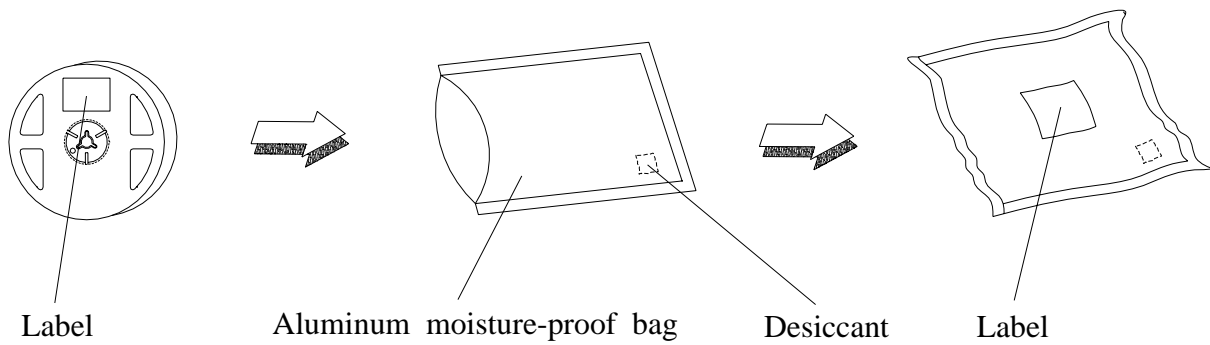
**67-31B UYC/A10/TR8**

Carrier Tape Dimensions: Loaded quantity 800 PCS per reel.



**Note: The tolerances unless mentioned is  $\pm 0.1\text{mm}$  Unit = mm**

**Moisture Resistant Packaging**



**67-31B UYC/A10/TR8****Reliability Test Items And Conditions**

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260 ±5 Min. 5sec.	6 Min.	22 PCS.	0/1
2	Temperature Cycle	H : +100 15min 5 min L : -40 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100 5min 10 sec L : -10 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	IF = 20 mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85 / 85%RH	1000 Hrs.	22 PCS.	0/1

**Precautions For Use**

## 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 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 90%RH or less.

2.3 After opening the package: The LED's floor life is 1 year under 30 deg C or less and 60% RH or less.

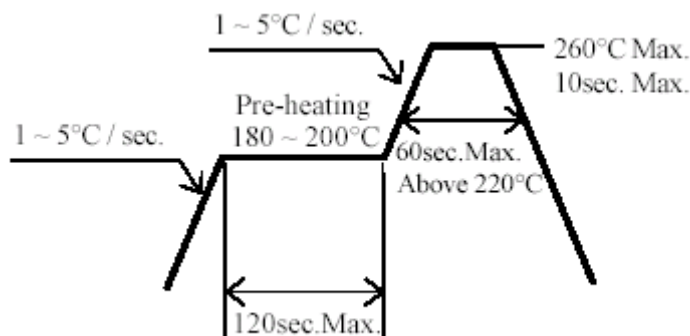
If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment :  $60\pm 5$  °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.

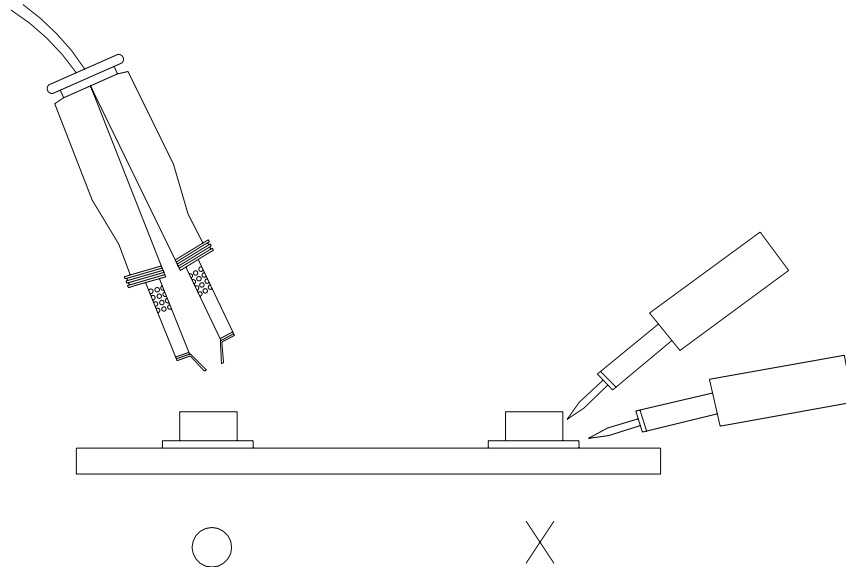
## 4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350 °C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.



**67-31B UYC/A10/TR8****5.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 beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



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