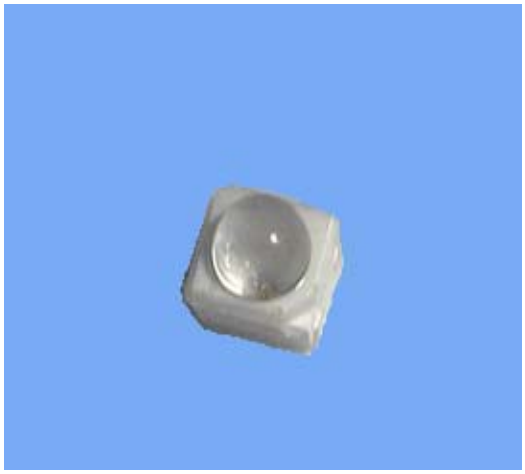
EVERLIGHTELECTRONICS CO.,LTD.

Technical Data Sheet
Power Top View LED

67-21B USOC / S530-A3 / TR8



Features

- PLCC-2 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 (12mm Tape).
- Pb-free.

Descriptions

The 67-21B series is available in soft orange, red and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector.

This feature makes the 67-21B series 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

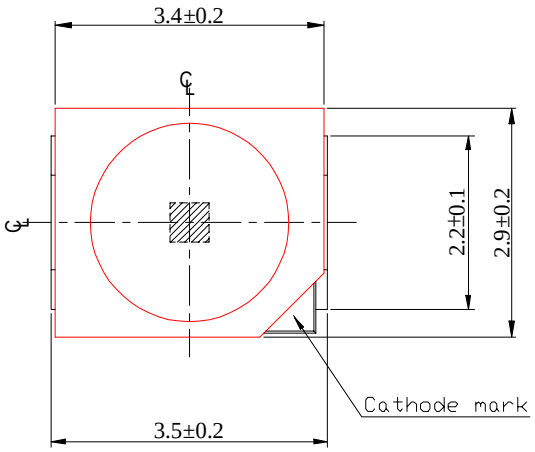
- Automotive: indoor and outdoor lighting.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

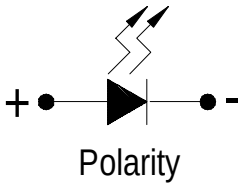
Device Selection Guide

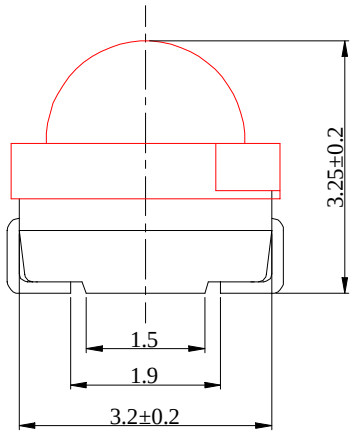
Chip		Lens Color
Material	**Emitted Color**	
AlInGaP	Super Sunset Orange	Water Clear

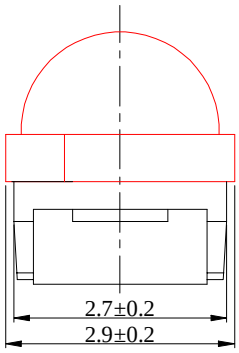
67-21B USOC / S530-A3 / TR8

Package Dimensions

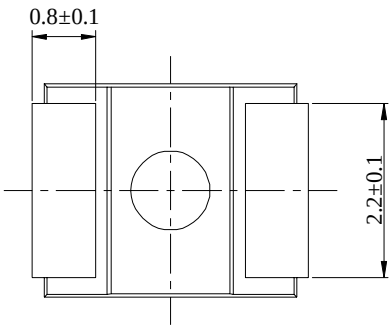


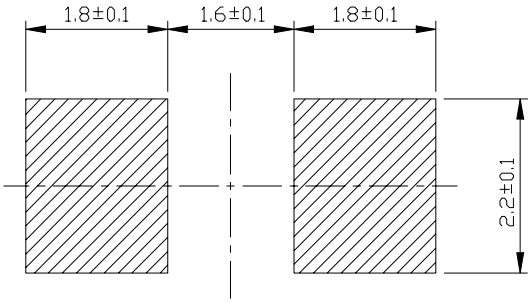






For reflow soldering (propose)





Notes: 1.All dimensions are in millimeters
2.Tolerances Unless Dimension = ±0.1mm
3.Angle tolerance = ±0.5°

67-21B USOC / S530-A3 / TR8

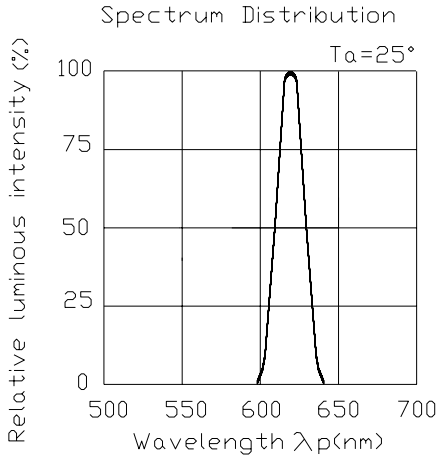
Absolute Maximum Ratings (T_a=25℃)

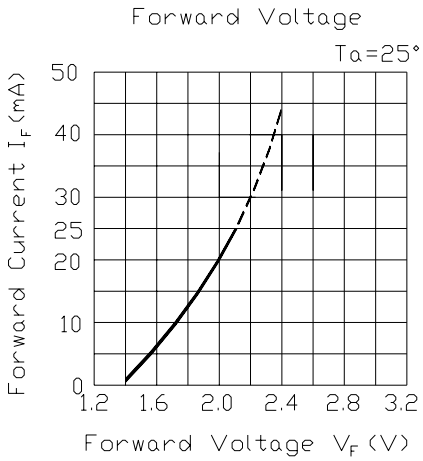
Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40~ +100	℃
Soldering Temperature	Tsol	260 (for 5 second)	℃
Electrostatic Discharge	ESD	2000	V
Power Dissipation	Pd	60	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I_{FP}	60	mA

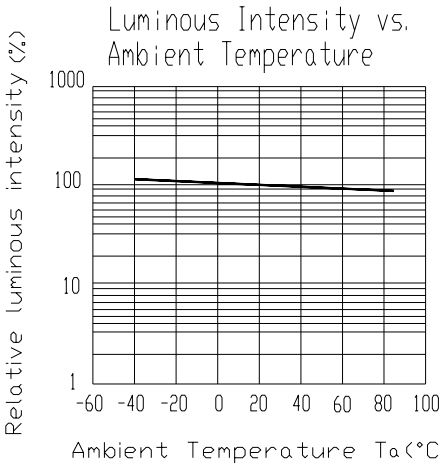
Electronic Optical Characteristics (T_a=25℃) :

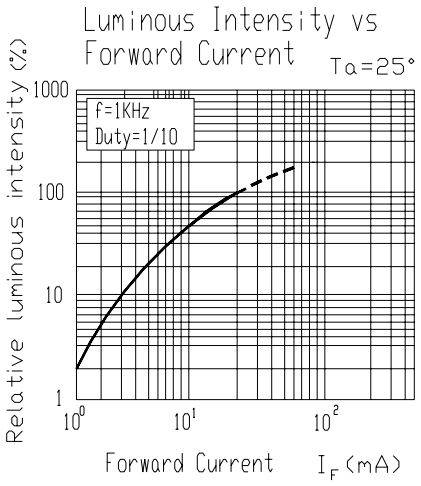
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	250	400	-----	mcd	I_F=20mA
Viewing Angle	2θ 1/2	-----	60	-----	deg	I_F=20mA
Peak Wavelength	λ p	-----	621	-----	nm	I_F=20mA
Dominant Wavelength	λ d	-----	615	-----	nm	I_F=20mA
Spectrum Radiation Bandwidth	$\triangle\lambda$	-----	18	-----	nm	I_F=20mA
Forward Voltage	V_F	-----	2.0	2.4	V	I_F=20mA
Reverse Current	I_R	-----	-----	10	μA	V_R=5V

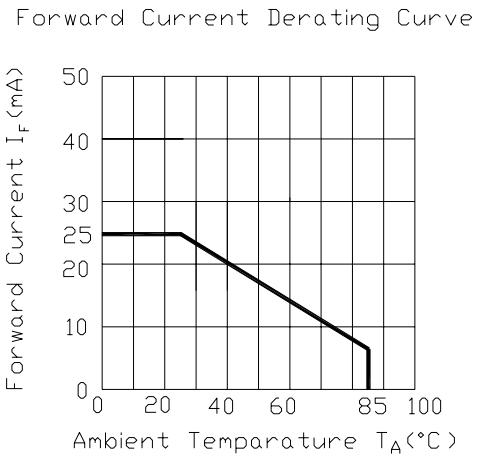
Typical Electro-Optical Characteristics Curves

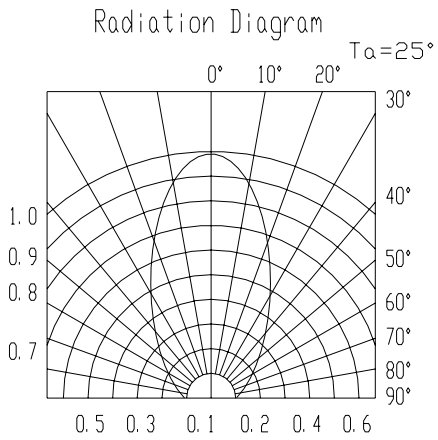












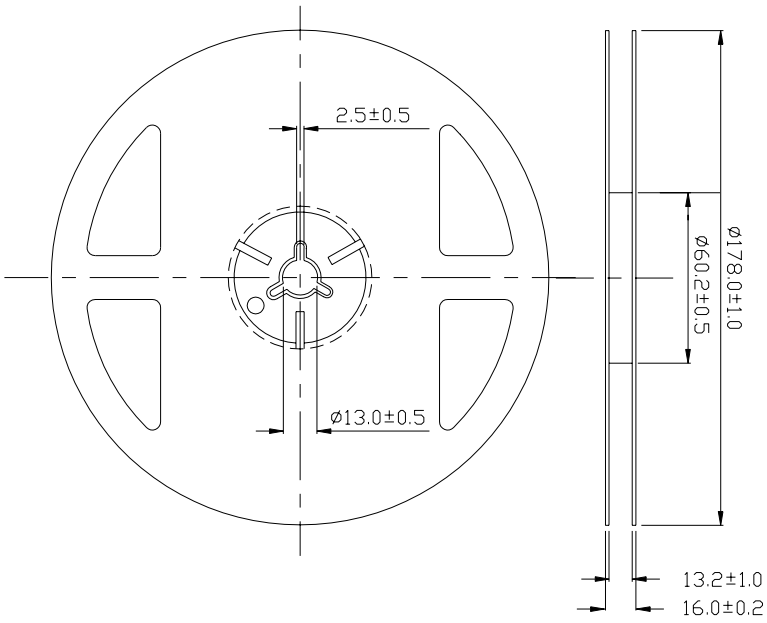
Label explanation

CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

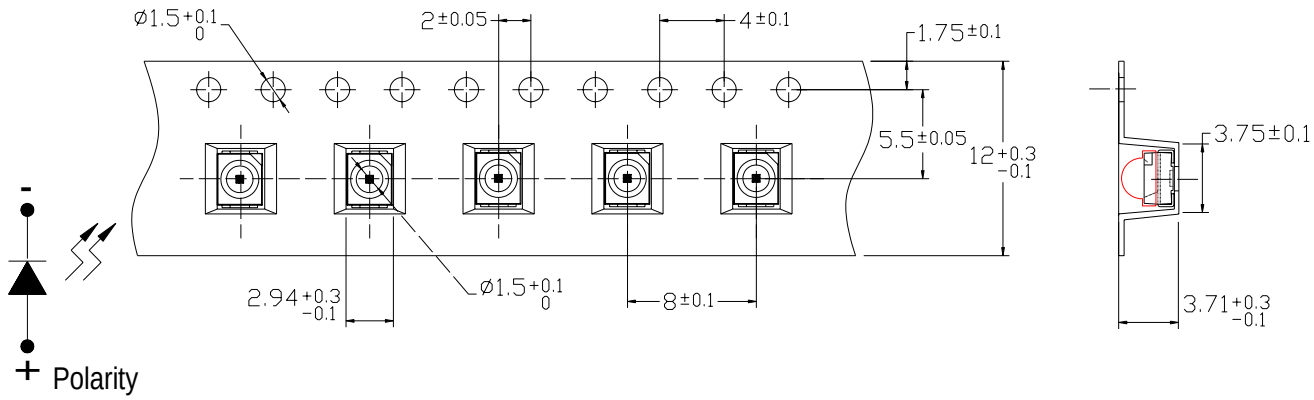
REF: Forward Voltage Rank

Reel Dimensions



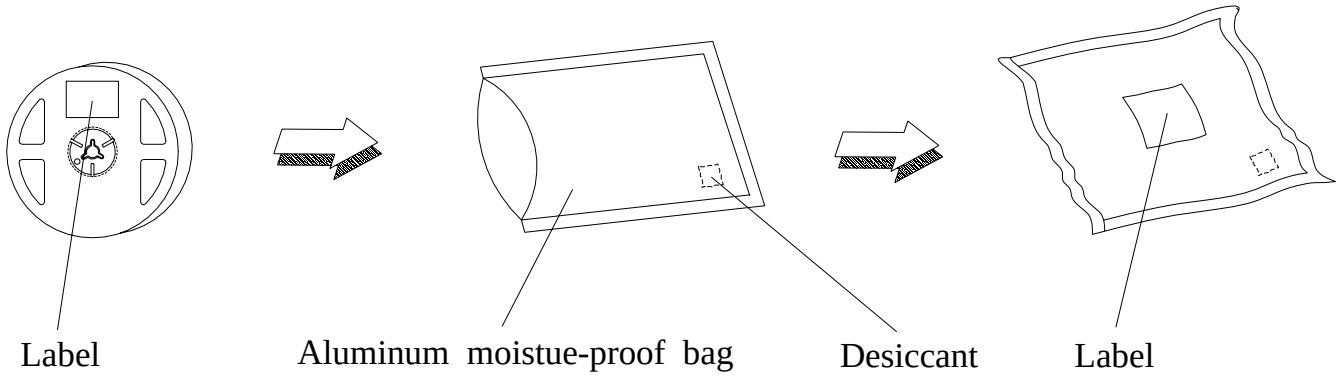
Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Carrier Tape Dimensions: Loaded quantity 1000 PCS per reel.



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

Moisture Resistant Packaging



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	I_F = 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℃ or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30℃ or less and 70%RH or less.

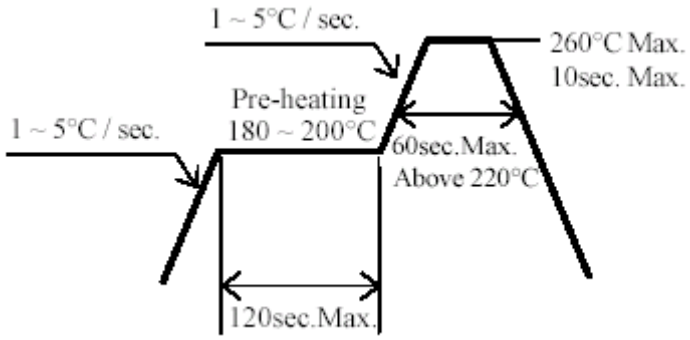
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 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±5℃ for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



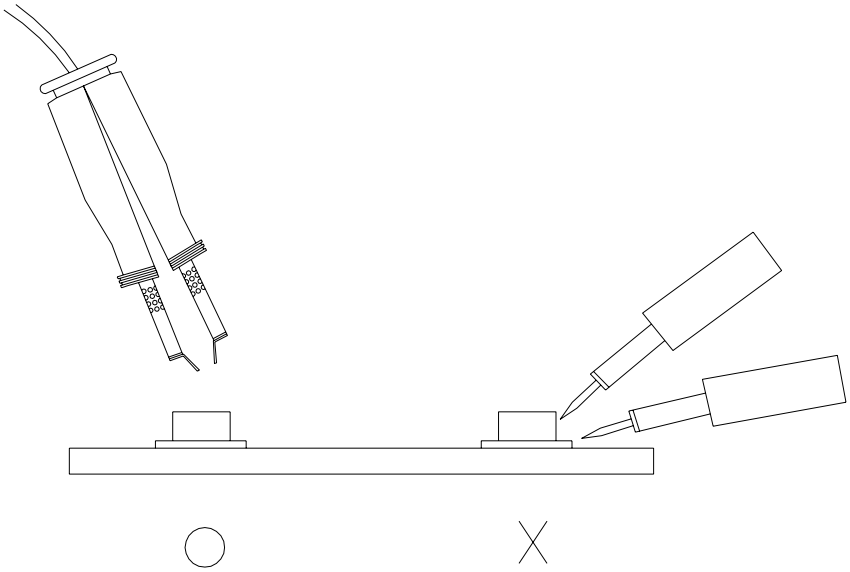
3.2 Reflow soldering should not be done more than two times.
3.3 When soldering, do not put stress on the LEDs during heating.
3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280℃ 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.

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.



EVERLIGHT ELECTRONICS CO., LTD.
Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936
Fax: 886-2267-6244, 2267-6189, 2267-6306
http://www.everlight.com