Technical Data Sheet

TOP View LEDs

67-21/G6C-FN2P2B/2T

Features

- P-LCC-2 package.
- White package.
- Optical indicator.
- Colorless clear window.
- Wide viewing angle.
- Suitable for vapor-phase reflow, Infrared reflow and wave solder processes.
- Computable with automatic placement equipment.
- Available on tape and reel (8mm Tape).
- Pb-free.
- Precondition: Bases on JEDEC J-STD 020D Level 3

Descriptions

- The 67-21 series is available in soft orange, green,blue and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector. This feature makes the SMT TOP 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.

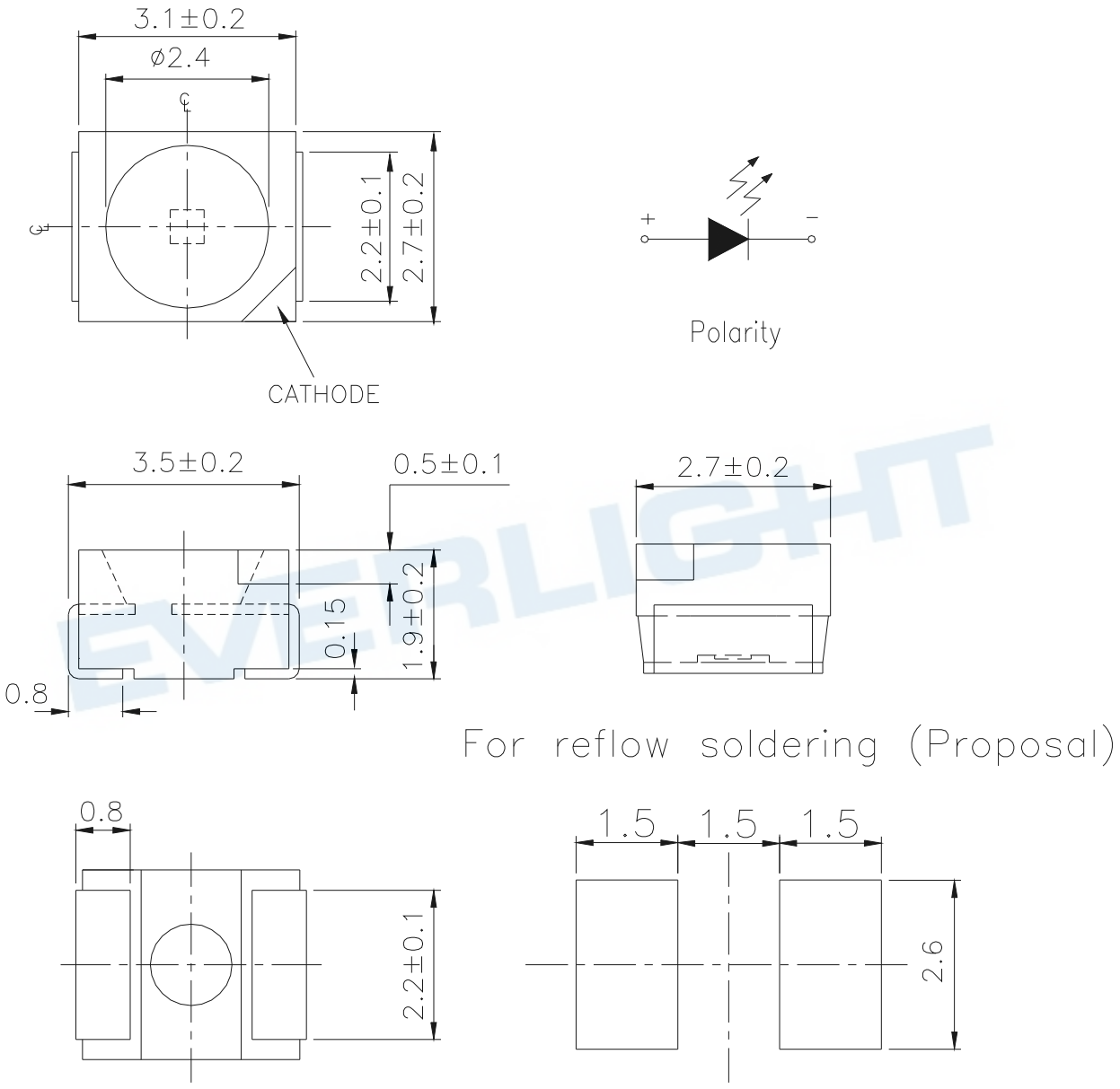
Applications

- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- Light pipe application.
- General use.

Device Selection Guide

Chip Material	Emitted Color	Resin Color
AlGaInP	Brilliant Yellow Green	Water Clear

Package Dimensions



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

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	60	mA
Power Dissipation	Pd	60	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	36	-----	72	mcd	I_F=20mA
Viewing Angle	2θ 1/2	-----	120	-----	deg	
Peak Wavelength	λp	-----	575	-----	nm	
Dominant Wavelength	λd	570	-----	574.5	nm	
Spectrum Radiation Bandwidth	Δλ	-----	20	-----	nm	
Forward Voltage	V_F	1.75	-----	2.35	V	

Notes:

1.Tolerance of Luminous Intensity: ±11%

2.Tolerance of Dominant Wavelength: ±1nm

3.Tolerance of Forward Voltage: ±0.1V

Bin Range of Luminous Intensity

Bin	Min.	Max.	Unit	Condition
N2	36	45	mcd	I_F=20mA
P1	45	57		
P2	57	72		

Bin Range of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
F	CC2	570.0	571.5	nm	I_F=20mA
	CC3	571.5	573.0		
	CC4	573.0	574.5		

Bin Range of Forward Voltage

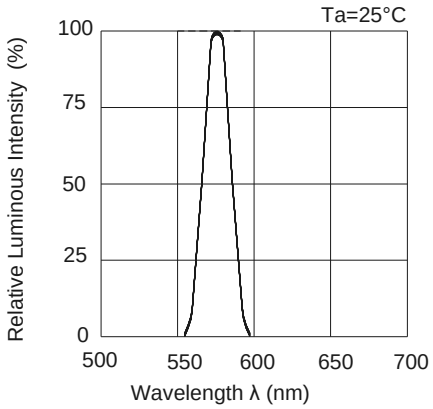
Group	Bin	Min.	Max.	Unit	Condition
B	0	1.75	1.95	V	I_F=20mA
	1	1.95	2.15		
	2	2.15	2.35		

Notes:

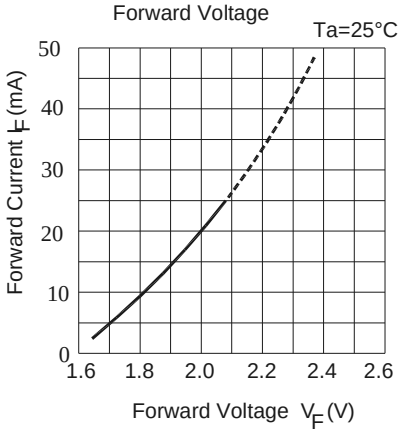
1.Tolerance of Luminous Intensity: ±11%
2.Tolerance of Dominant Wavelength: ±1nm
3.Tolerance of Forward Voltage: ±0.1V

Typical Electro-Optical Characteristics Curves

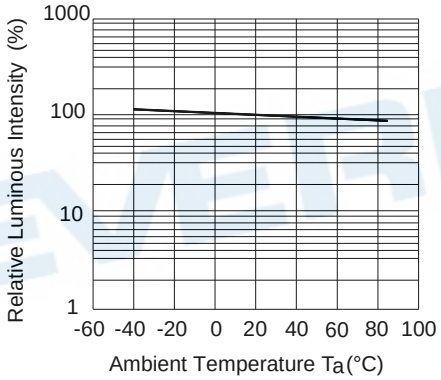
Spectrum Distribution



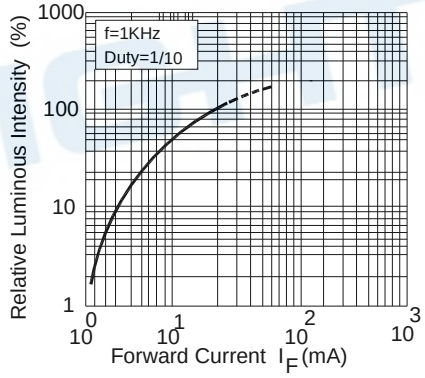
Forward Current vs. Forward Voltage



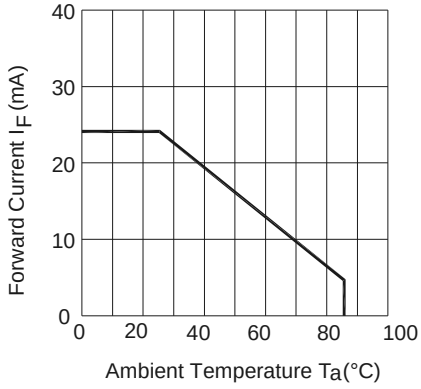
Relative Luminous Intensity vs. Ambient Temperature



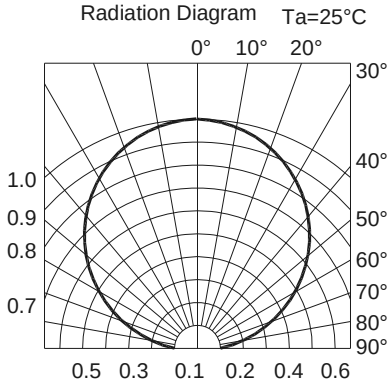
Relative Luminous Intensity vs. Forward Current



Forward Current Derating Curve

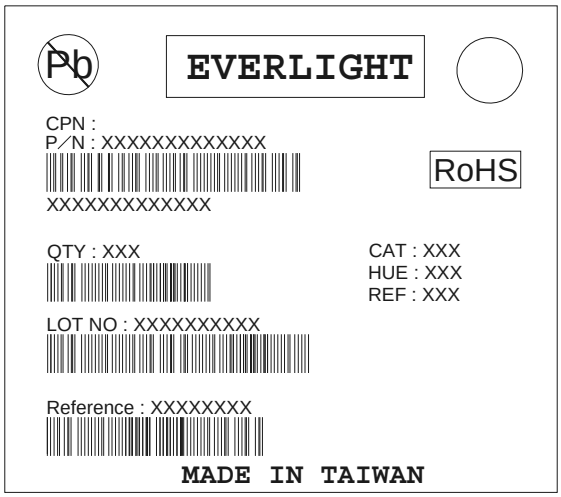


Radiation Diagram

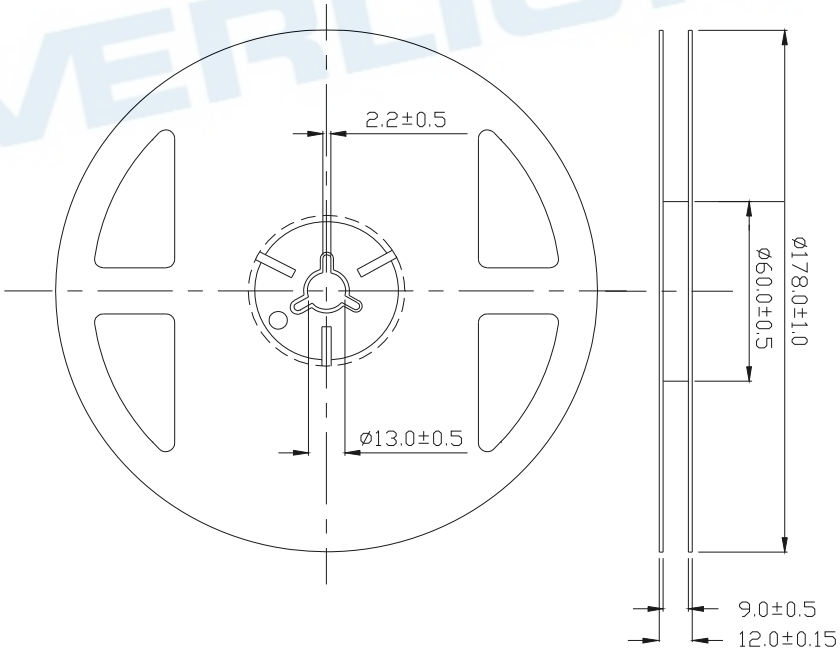


Label Explanation

CAT: Luminous Intensity Rank
HUE: Dom. Wavelength Rank
REF: Forward Voltage Rank



Reel Dimensions



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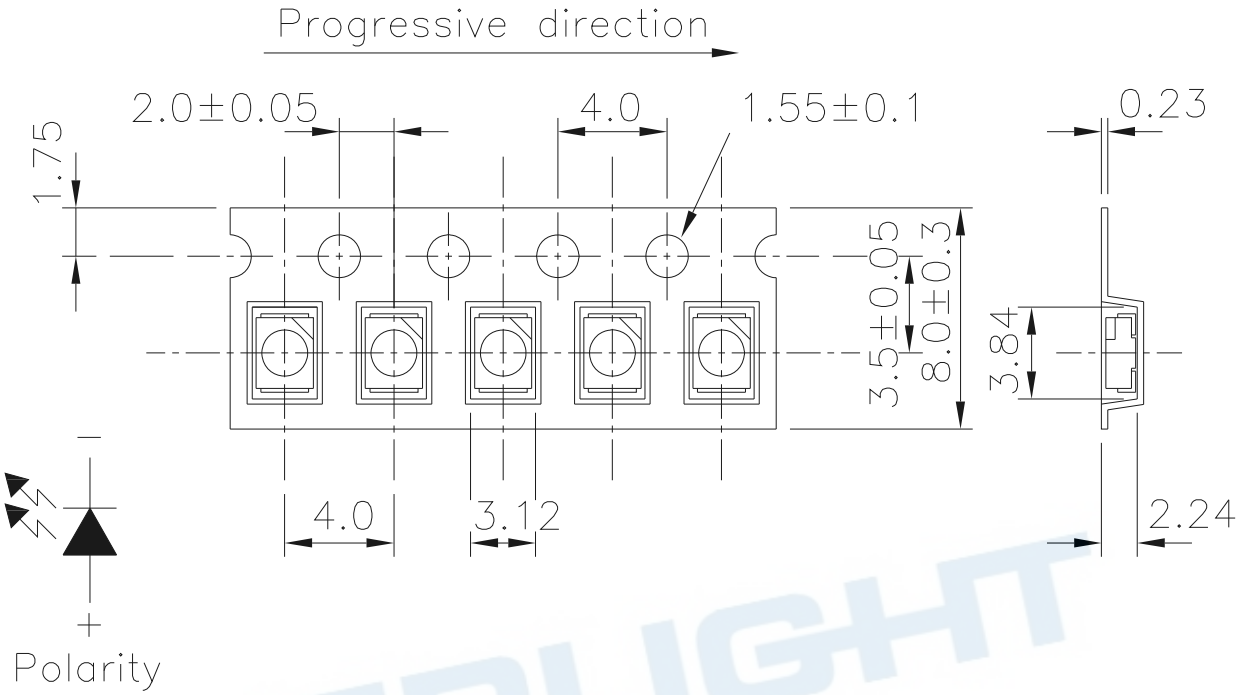
Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel.



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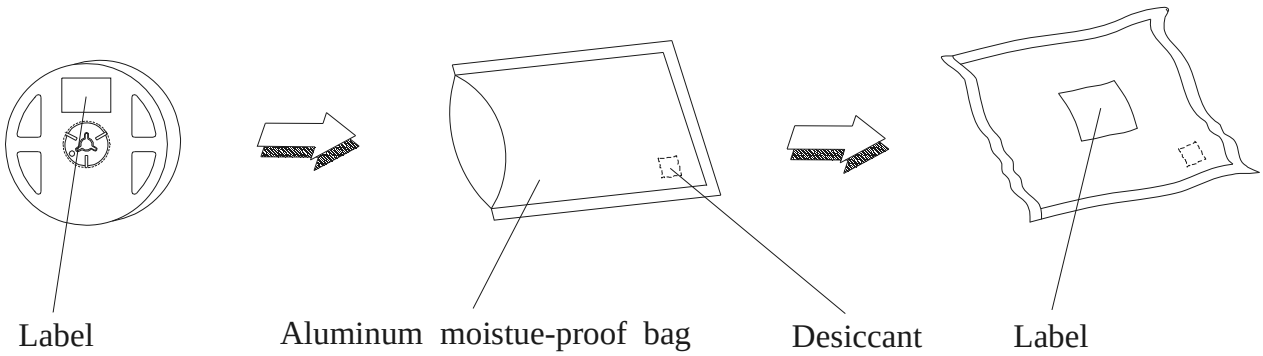
Moisture Resistant Packaging



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.

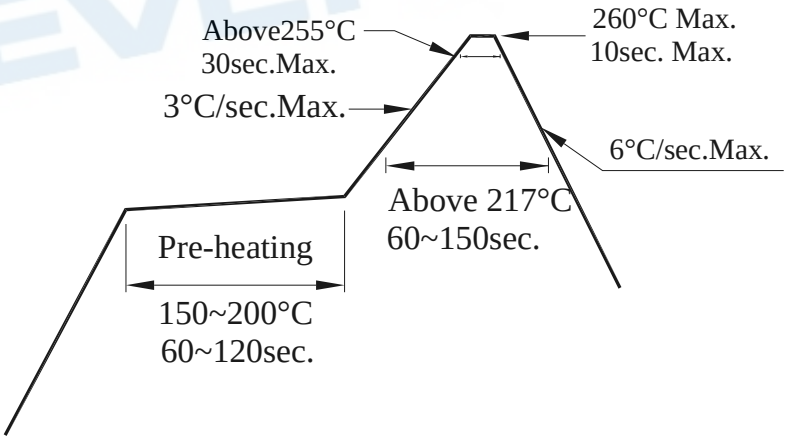
   2.2 Before opening the package: The LEDs should be kept at 30℃ or less and 90%RH or less.

   2.3 After opening the package: The LED's floor life are 168 hours under 30℃ 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 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.

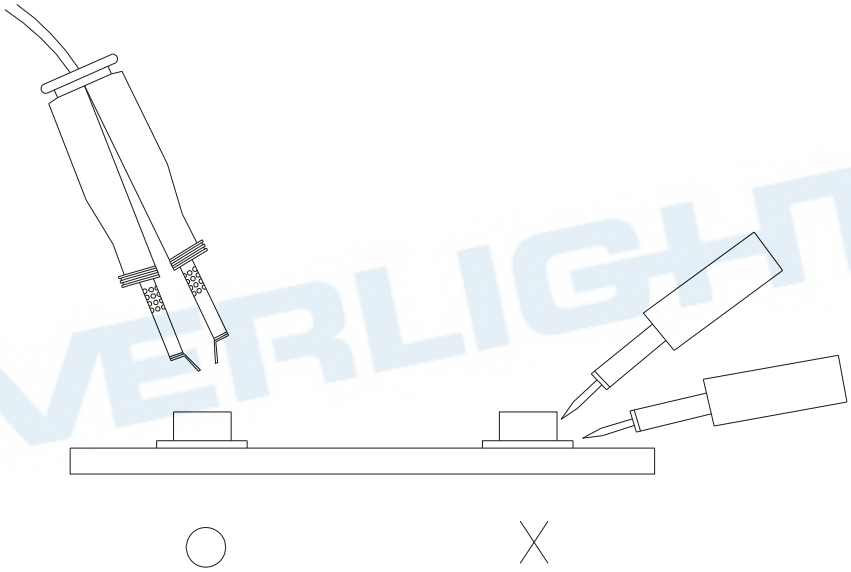
   3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ 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.



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2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
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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