DATASHEET

SMD ▪ Side LEDs
57-21/Y2C-AS1T1B/2E



Features

- P-LCC-4 package.
- White package.
- Fluorescence Type
- High Luminous Intensity
- High Efficiency
- Pb-free.
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free .(Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)
- Precondition: Bases on JEDEC J-STD 020D Level 3

Description

• The 57-21series 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 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

- OA equipment
- Backlighting of full color LCD
- Automotive equipment
- Replacement of conventional light bulbs and Fluorescent Lamps

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Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Yellow	Water Clear

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	Pd	120	mW
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	T_{sol}	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

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Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	180	-----	360	mcd	I_F=20mA
Viewing Angle	$2\theta_{1/2}$	-----	120	-----	deg	I_F=20mA
Peak Wavelength	λp	-----	591	-----	nm	I_F=20mA
Dominant Wavelength	λd	586	-----	595	nm	I_F=20mA
Spectrum Radiation Bandwidth	Δλ	-----	20	-----	nm	I_F=20mA
Forward Voltage	V_F	1.75	-----	2.35	V	I_F=20mA
Reverse Current	I_R	-----	-----	10	μA	V_R=5V

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

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Bin Range Of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
A	D3	586	589	nm	IF=20mA
	D4	589	592		
	D5	592	595		

Bin Rang Of Luminous Intensity

Bin	Min	Max	Unit	Condition
S1	180.0	225.0	mcd	IF=20mA
S2	225.0	285.0		
T1	285.0	360.0		

Bin Rang Of Forward Voltage

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

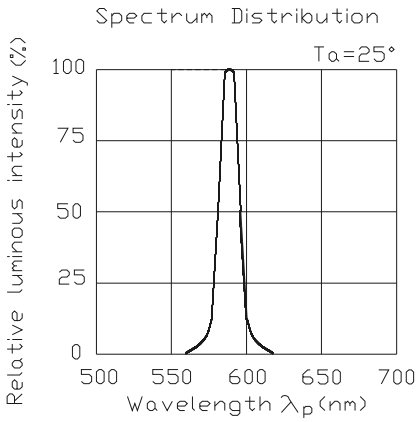
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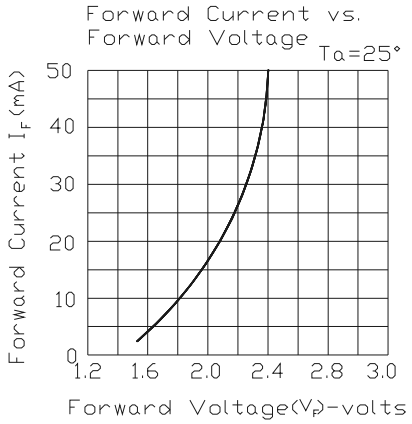
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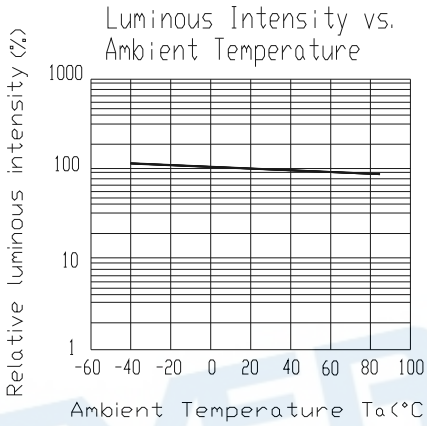
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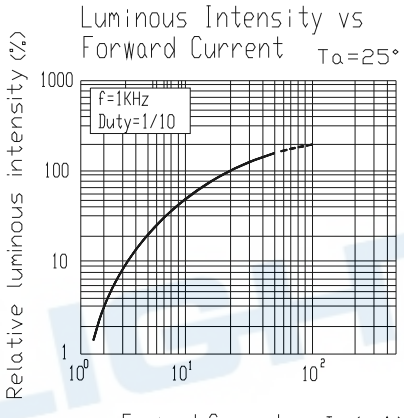
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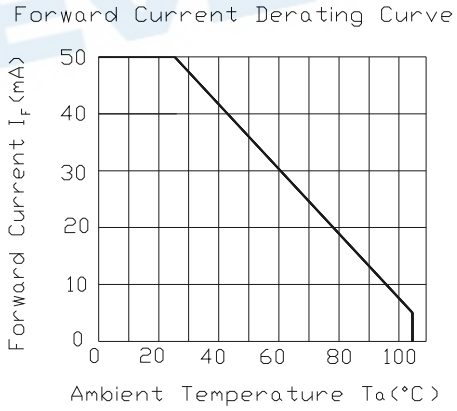
Typical Electro-Optical Characteristics Curves

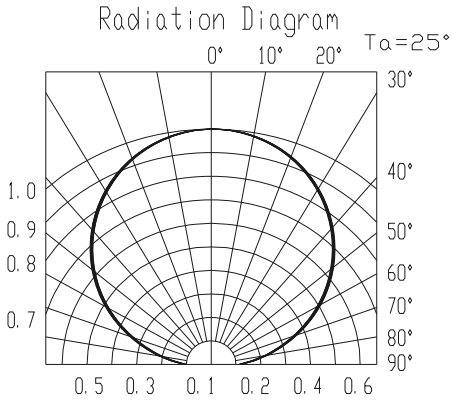






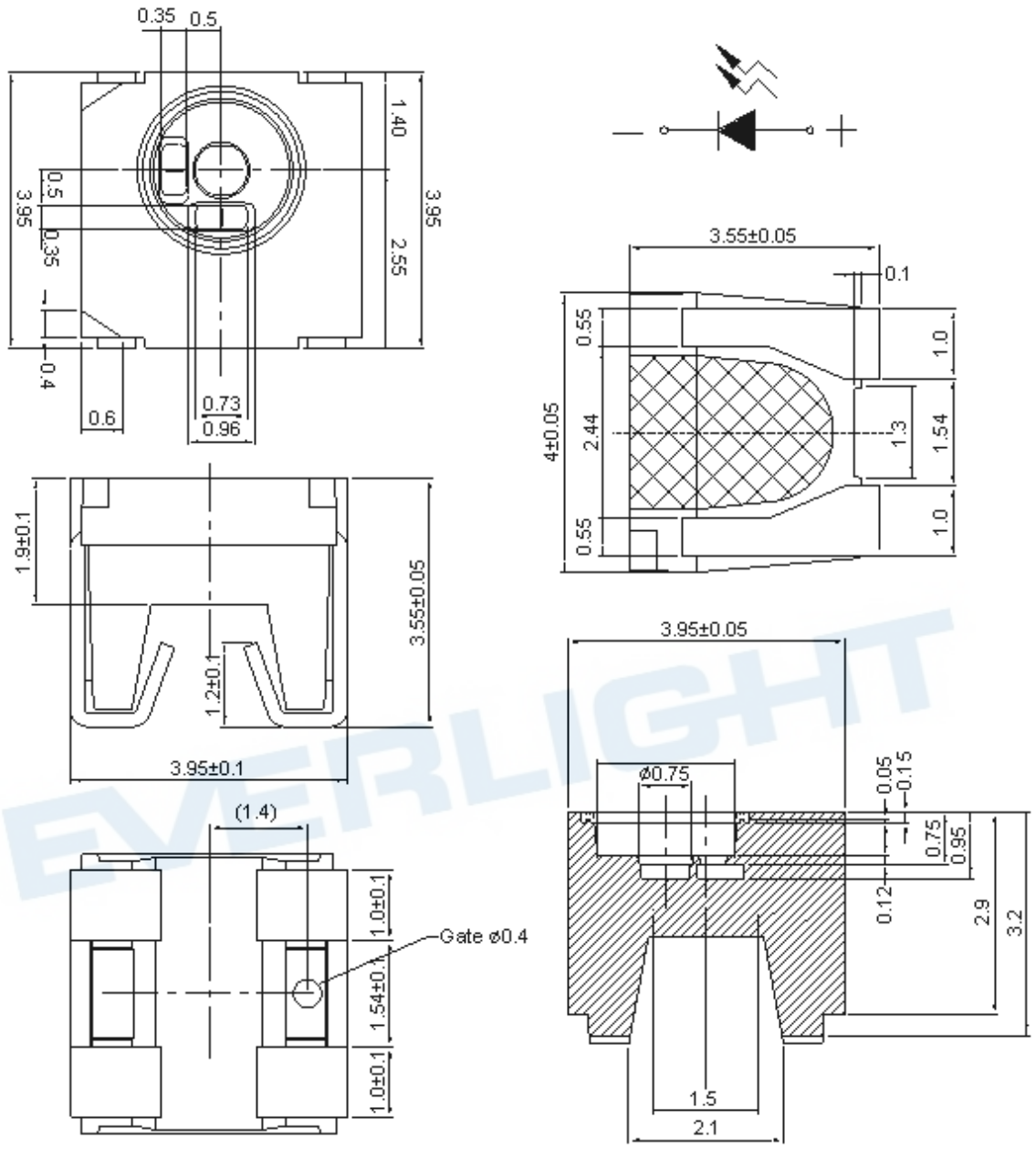






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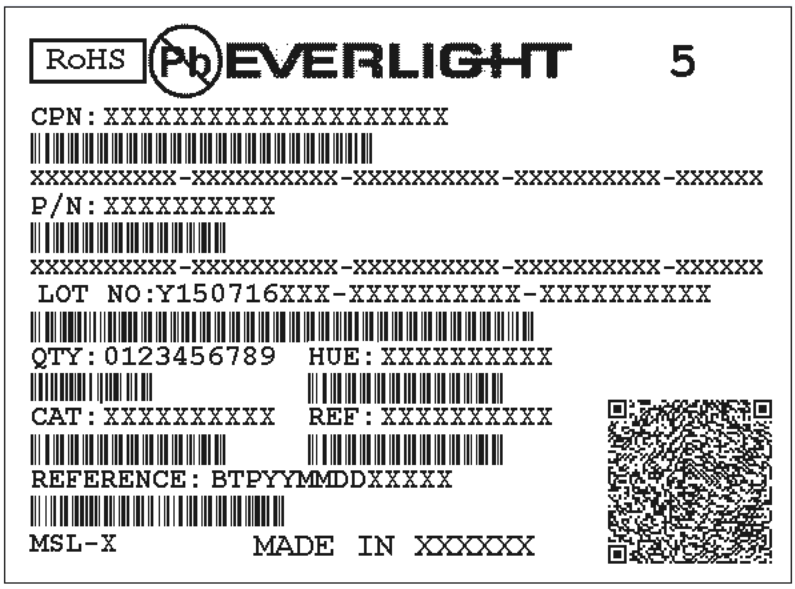
Package Dimension



Note: Tolerances unless mentioned ±0.1mm. Unit = mm

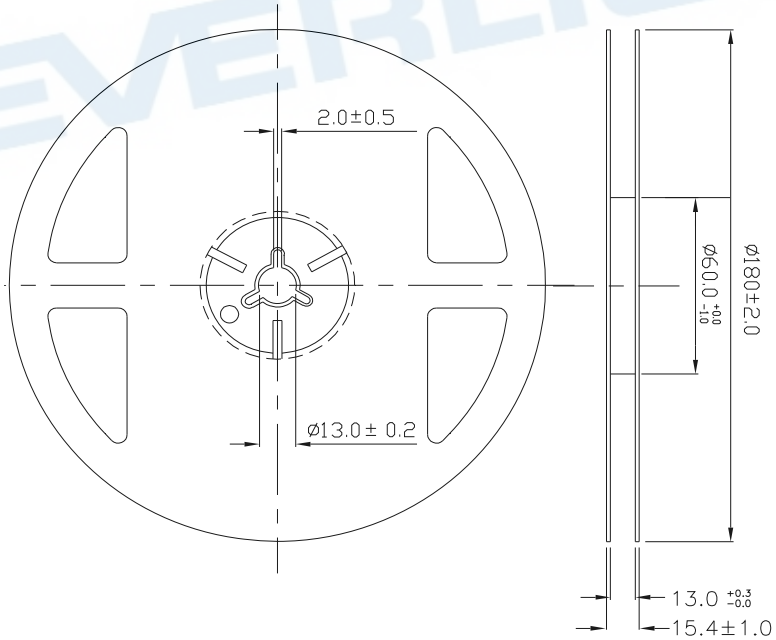
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Moisture Resistant Packing Materials
Label Explanation



·CPN: Customer's Product Number
·P/N: Product Number
·QTY: Packing Quantity
·CAT: Luminous Intensity Rank
·HUE: Dom. Wavelength Rank
·REF: Forward Voltage Rank
·LOT No: Lot Number

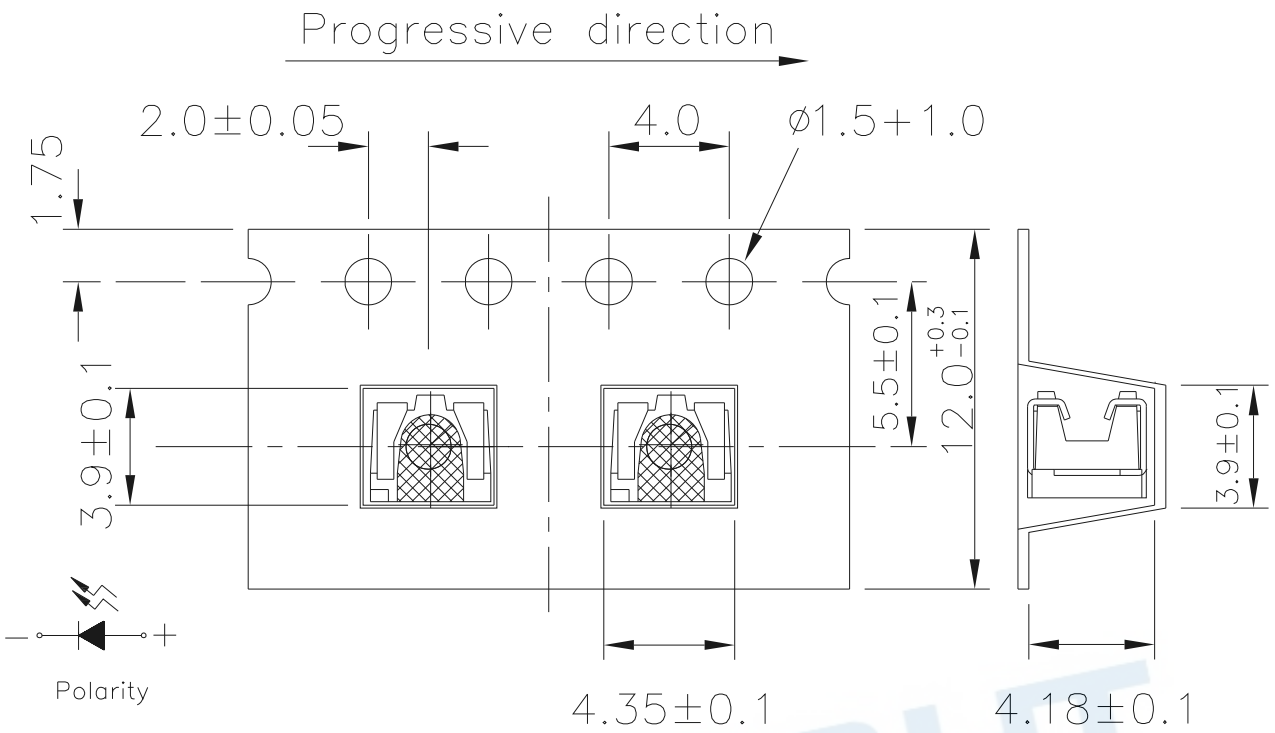
Reel Dimensions



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

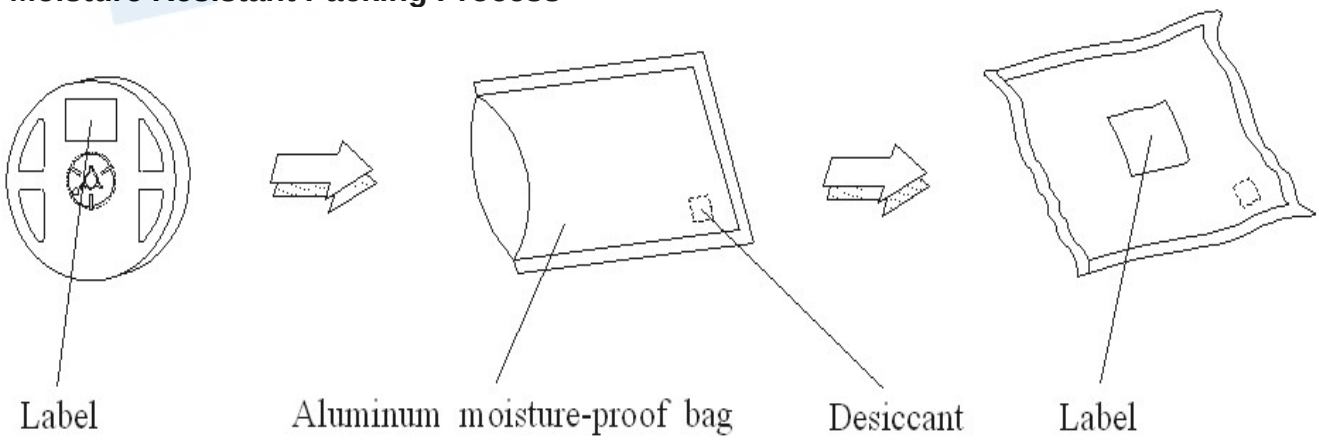
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Carrier Tape Dimensions: Loaded Quantity 500 pcs Per Reel



Note: Tolerances unless mentioned ±0.1mm. Unit = mm

Moisture Resistant Packing Process



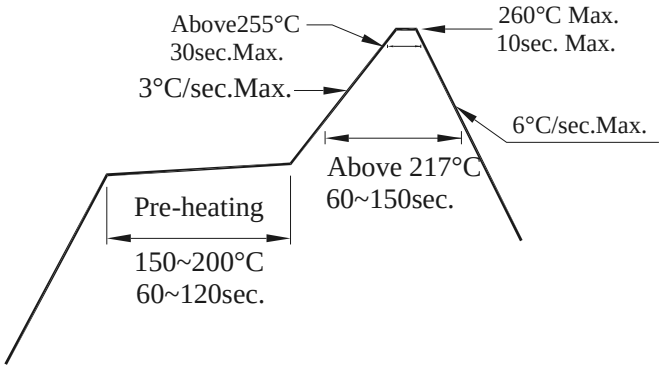
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Precautions for Use

1. Over-current-proof

1.1 Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).



2. Storage

2.1 Moisture proof bag should only be opened immediately prior to usage.

2.2 Environment should be less than 30℃ and 60% RH when moisture proof bag is opened.

2.3 After opening the package MSL Conditions stated on page 1 of this spec should not be exceeded.

2.4 If the moisture sensitivity card indicates higher than acceptable moisture, the component should be baked at min. 60deg +/-5deg 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.

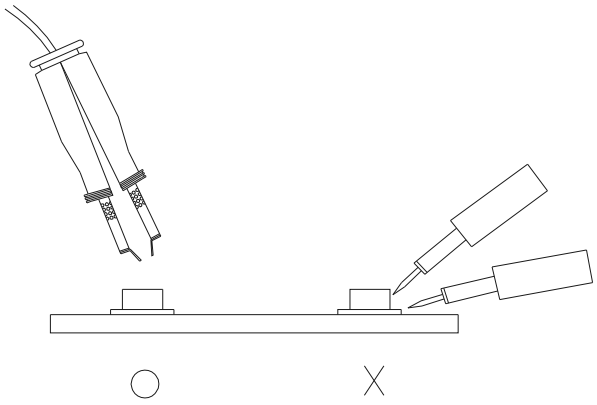
3.4 After soldering, do not warp the circuit board.

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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Application Restrictions

High reliability applications such as military/aerospace, automotive safety/security systems,and medical equipment may require different product. If you have any concerns, please contact Everlight before using this product in your application. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.

DISCLAIMER

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2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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