

SMD- Power Top View LEDs 67-31A/RSC-AV1W2B9Z5/2T



Features

- P-LCC-3 package.
- High flux output.
- High current capability.
- Optical indicator
- Colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector.
- Wide viewing angle.
- Suitable for automatic placement equipment.
- Precondition: Bases on JEDEC J-STD 020D Level 3
- Pb-free.
- The product itself will remain within RoHS compliant version.

Applications

- Switches, symbol, mobile phone, digital camera and illuminated advertising.
- Display for indoor and outdoor application.
- Ideal for coupling into light guides.
- Amusement equipment.
- General applications.
- Optical indicator.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Red	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	70	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	P_d	130	mW
Junction Temperature	T_j	115	°C
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
ESD	ESD_{HBM}	2000	V
Soldering Temperature	T_{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	715	-----	1800	mcd	$I_F=50mA$
Viewing Angle	$2\theta_{1/2}$	-----	120	-----	deg	$I_F=50mA$
Peak Wavelength	λ_p	-----	632	-----	nm	$I_F=50mA$
Dominant Wavelength	λ_d	617.5	---	633.5	nm	$I_F=50mA$
Spectrum Radiation Bandwidth	$\Delta\lambda$	-----	20	-----	nm	$I_F=50mA$
Forward Voltage	V_F	1.95	---	2.75	V	$I_F=50mA$
Reverse Current	I_R	---	---	10	μA	$V_R=5V$

Notes:

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

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
V1	715	900	mcd	I _F =50mA
V2	900	1120		
W1	1120	1420		
W2	1420	1800		

Bin Range of Dom. Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
A	E4	617.5	621.5	nm	I _F =50mA
	E5	621.5	625.5		
	E6	625.5	629.5		
	E7	629.5	633.5		

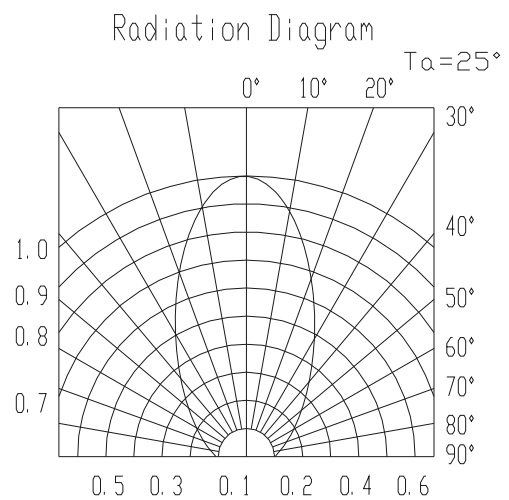
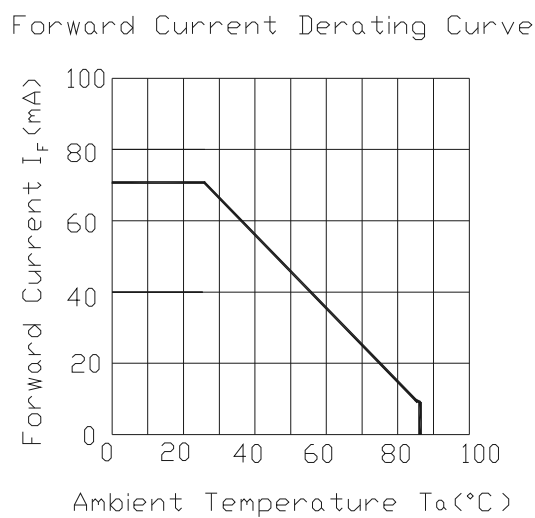
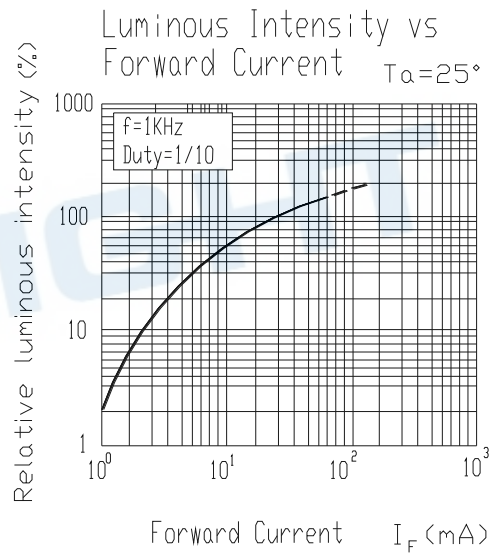
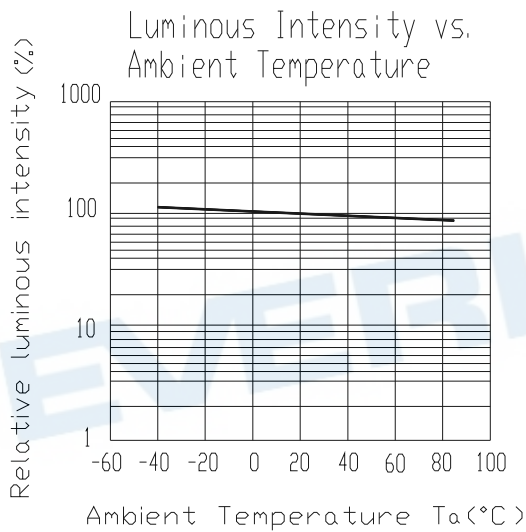
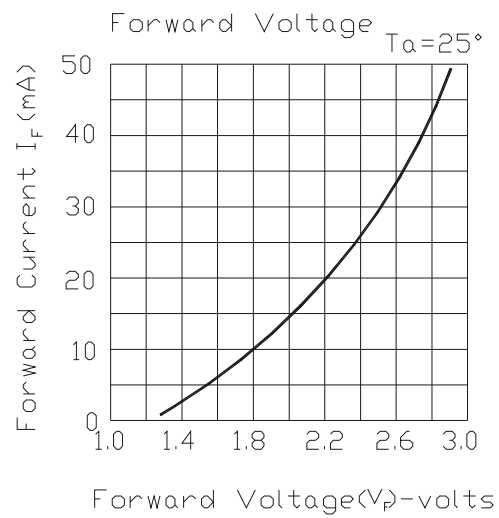
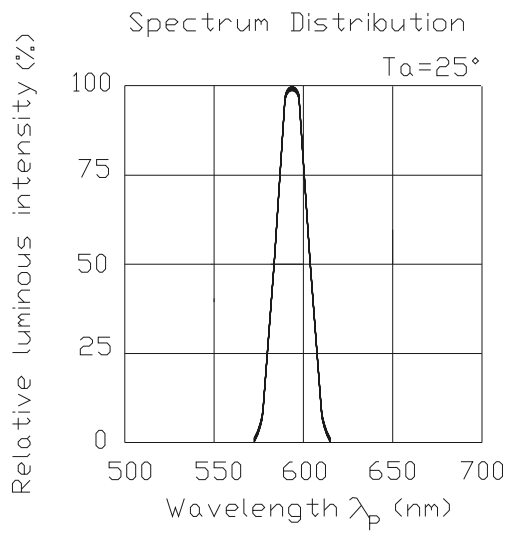
Bin Range of Forward Voltage

Group	Bin Code	Min.	Max.	Unit	Condition
B9	1	1.95	2.15	V	I _F =50mA
	2	2.15	2.35		
	3	2.35	2.55		
	4	2.55	2.75		

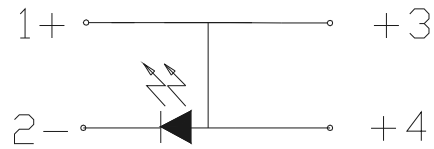
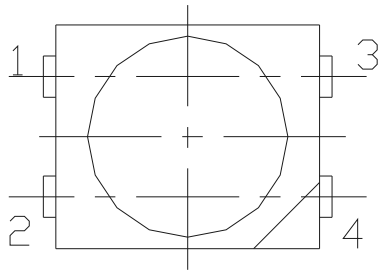
Notes:

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

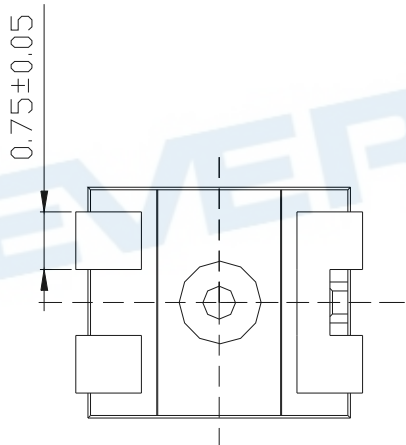
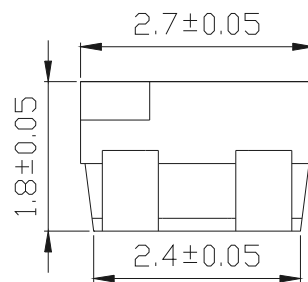
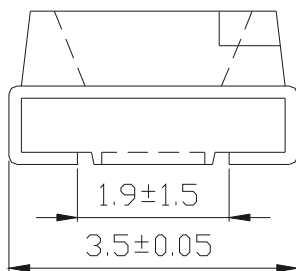
Typical Electro-Optical Characteristics Curves



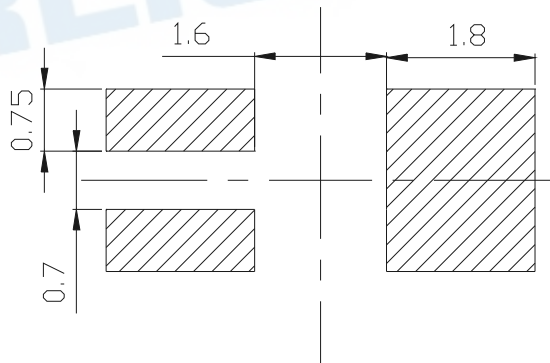
Package Dimension



Polarity



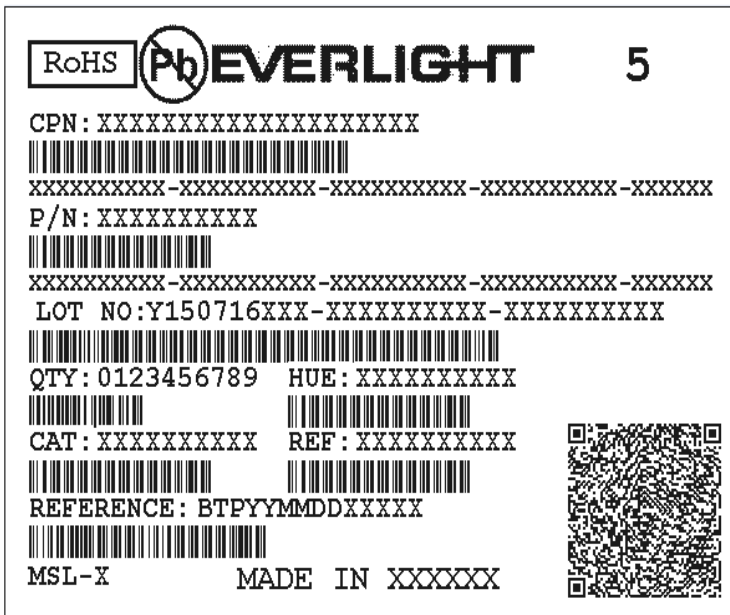
for reflow
soldering (propose)



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

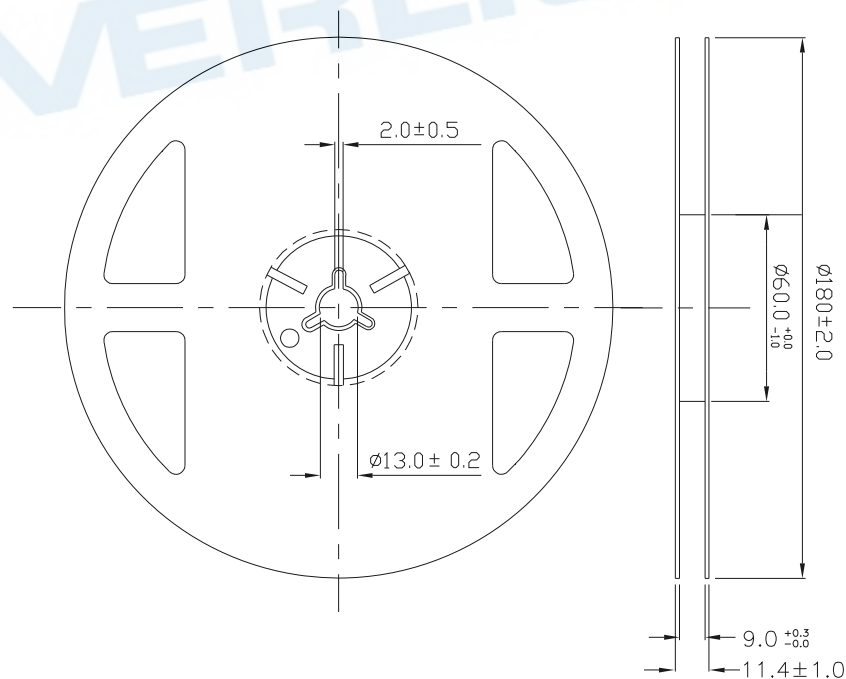
Moisture Resistant Packing Materials

Label Explanation

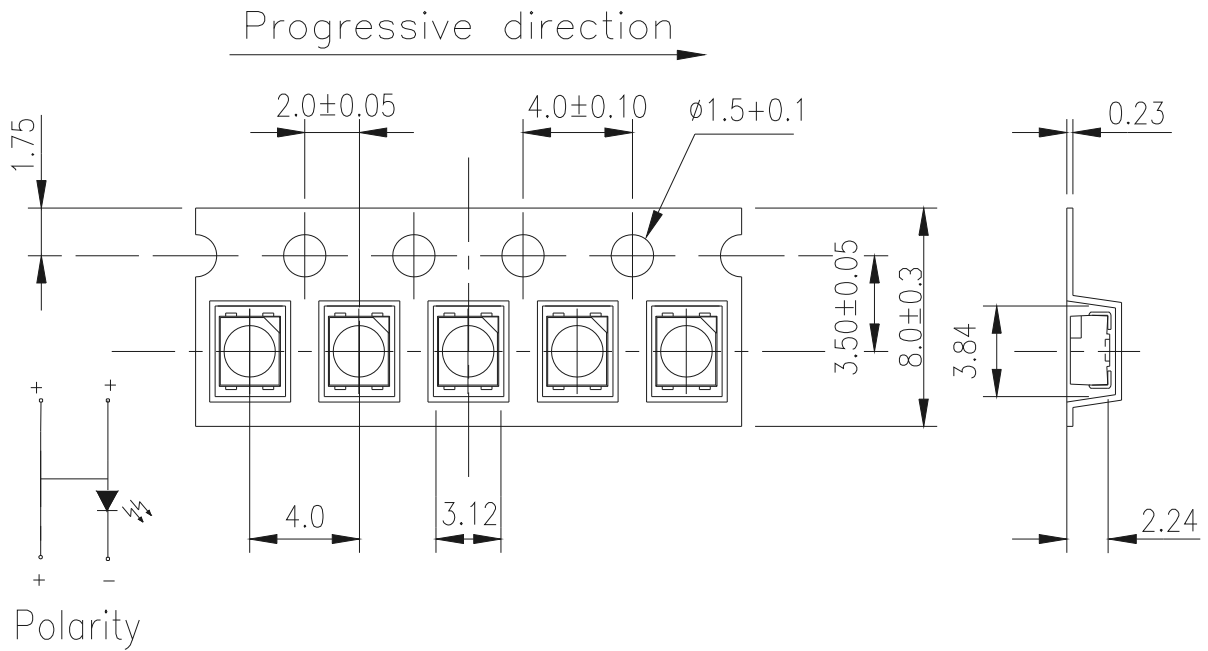


- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

Reel Dimensions

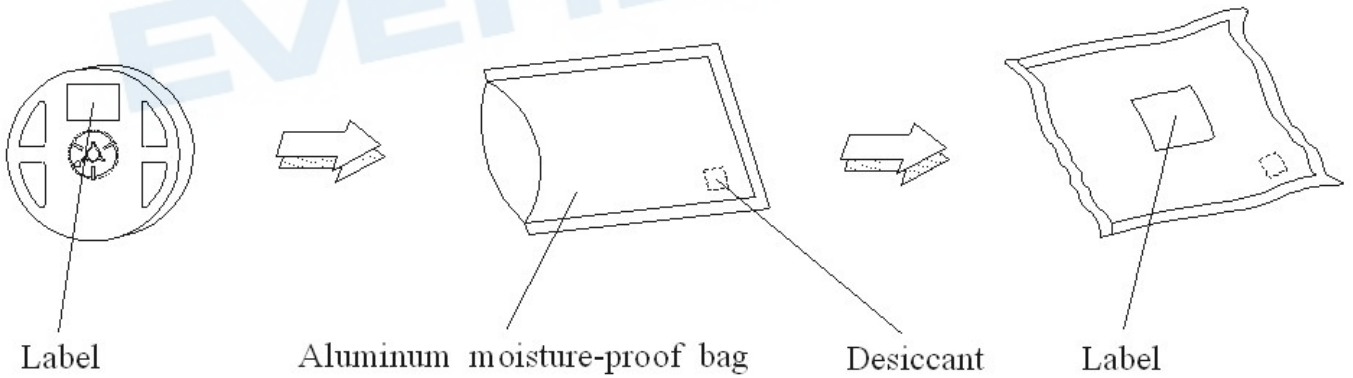


Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



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

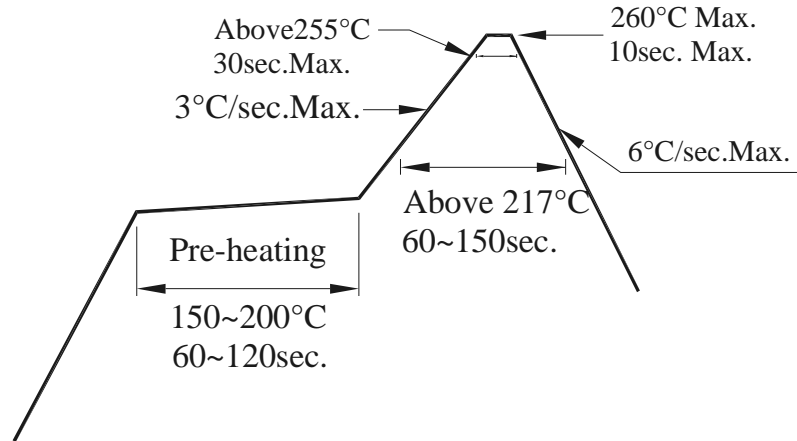
Moisture Resistant Packing Process



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°C 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

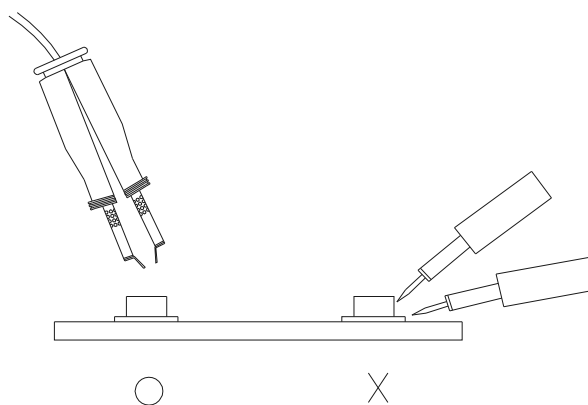
- 3.1 Pb-free solder temperature profile
- 3.2 Reflow soldering should not be done more than two times.
- 3.3 When soldering, do not put stress on the LEDs during heating.
- 3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

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

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.



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

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
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.
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