

SMD ▪ Side LEDs

57-11UTC/S827-1/TR8



### Features

- P-LCC-4 package.
- White package.
- Fluorescence Type
- High Luminous Intensity
- High Efficiency
- ESD protection.
- 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 57-11series 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

**Device Selection Guide**

Chip Materials	Emitted Color	Resin Color
InGaN	White	Water Clear

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I <sub>FP</sub>	100	mA
Power Dissipation	P <sub>d</sub>	110	mW
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +90	°C
ESD	ESD <sub>HBM</sub>	2000	V
Soldering Temperature	T <sub>sol</sub>	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 <sub>v</sub>	900	-----	1800	mcd	I <sub>F</sub> =20mA
Viewing Angle	2θ <sub>1/2</sub>	-----	120	-----	deg	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	2.75	----	3.95	V	I <sub>F</sub> =20mA

## Note:

1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Forward Voltage: ±0.1V

**Bin Range of Luminous Intensity**

Bin Code	Min.	Max.	Unit	Condition
V2	900	1120	mcd	I <sub>F</sub> =20mA
W1	1120	1420		
W2	1420	1800		

Note:

Tolerance of Luminous Intensity:  $\pm 11\%$

**Bin Range Of Forward Voltage**

Groups	Bin Code	Min.	Max.	Unit	Condition
M	5	2.75	3.05	V	I <sub>F</sub> =20mA
	6	3.05	3.35		
	7	3.35	3.65		
	8	3.65	3.95		

Note:

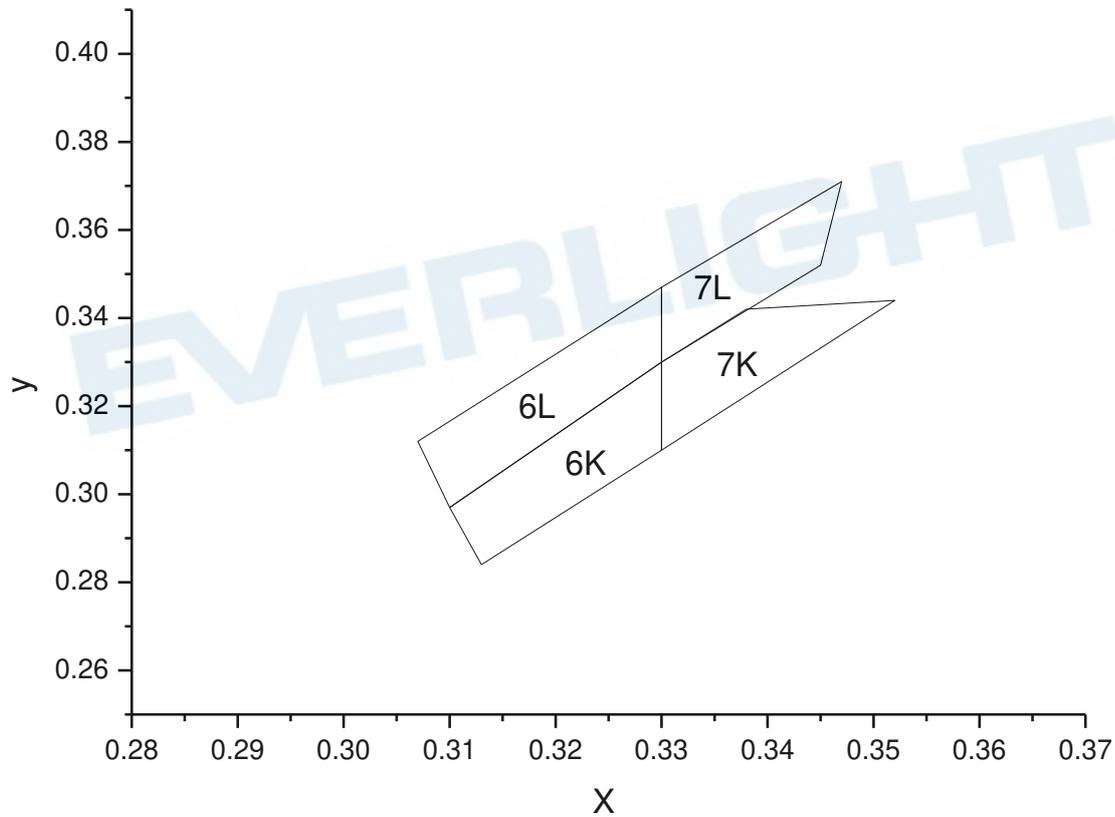
Tolerance of Forward Voltage:  $\pm 0.1V$

## Bin Range Of Chromaticity Coordinates

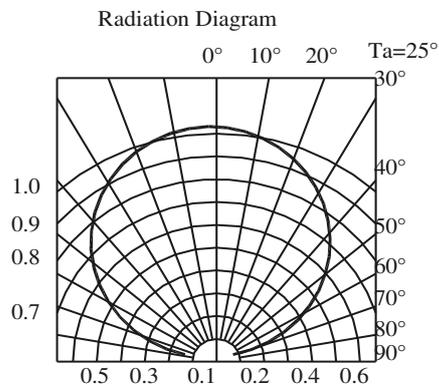
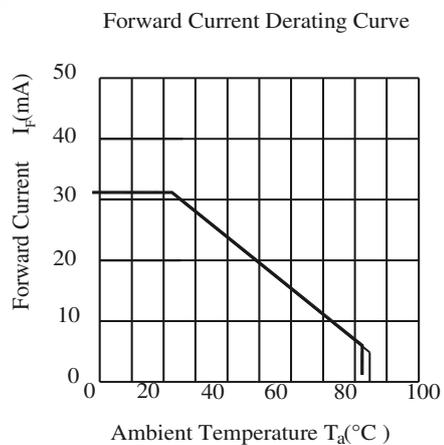
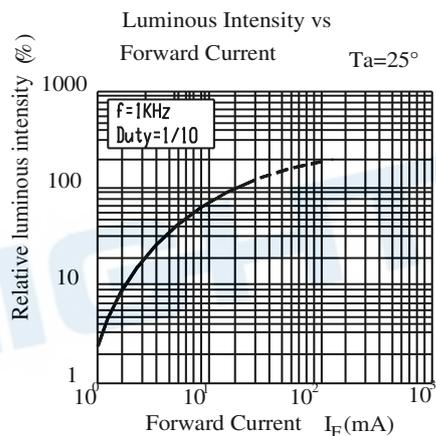
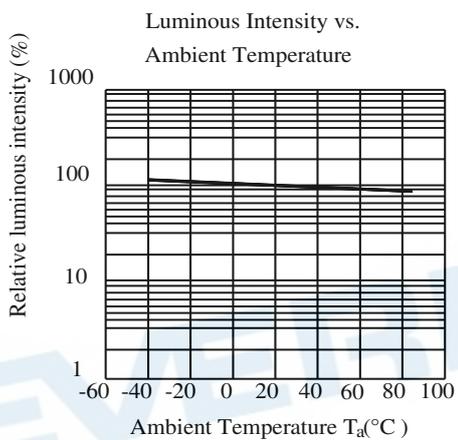
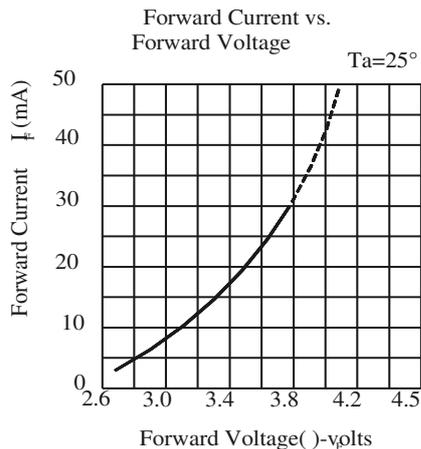
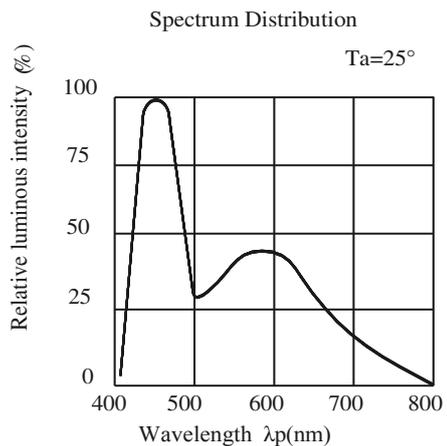
Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
6K	0.3130	0.2840	6L	0.3100	0.2970
	0.3100	0.2970		0.3070	0.3120
	0.3300	0.3300		0.3300	0.3470
	0.3300	0.3100		0.3300	0.3300
7K	0.3300	0.3100	7L	0.3300	0.3300
	0.3300	0.3300		0.3300	0.3470
	0.3380	0.3420		0.3470	0.3710
	0.3520	0.3440		0.3450	0.3520

### Notes:

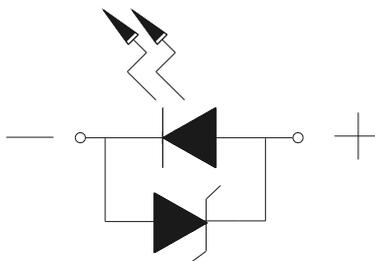
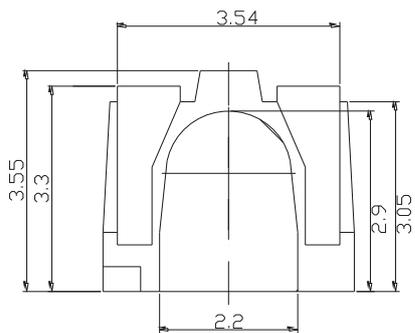
1. Tolerance of Chromaticity Coordinates:  $\pm 0.01$



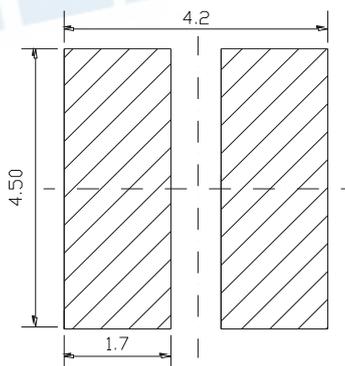
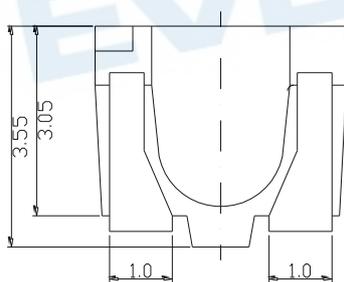
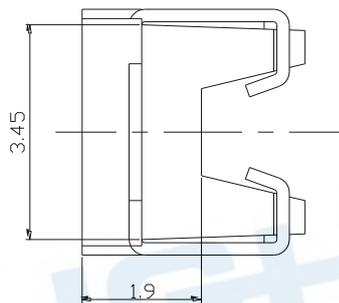
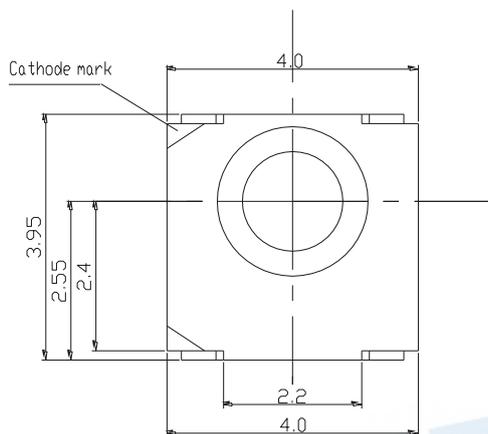
# Typical Electro-Optical Characteristics Curves



# Package Dimension



Polarity



Recommended soldering pad design

Note: Tolerances unless mentioned  $\pm 0.1$ mm. Unit = mm

# Moisture Resistant Packing Materials Label Explanation

RoHS

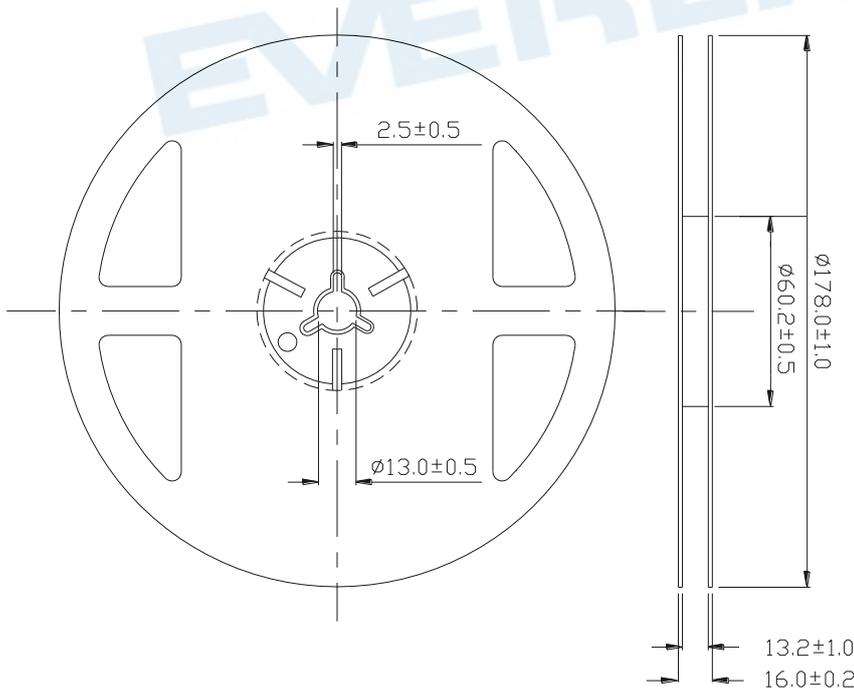
**EVERLIGHT**

5

CPN: XXXXXXXXXXXXXXXXXXXXXXXX  
  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX  
P/N: XXXXXXXXXXXX  
  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX  
LOT NO: Y150716XXX-XXXXXXXXXX-XXXXXXXXXX  
  
QTY: 0123456789 HUE: XXXXXXXXXXXX  
  
CAT: XXXXXXXXXXXX REF: XXXXXXXXXXXX  
  
REFERENCE: BTPYYMDDXXXXX  
  
MSL-X                      MADE IN XXXXXX

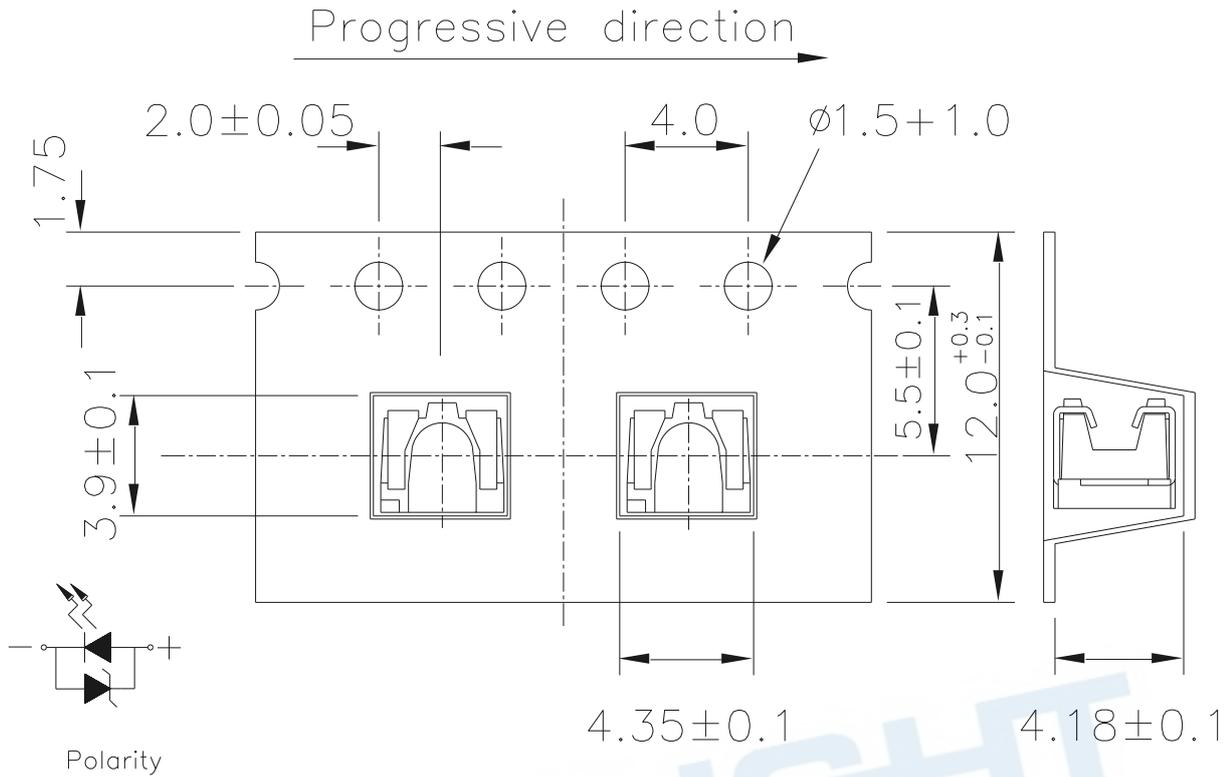
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

## Reel Dimensions



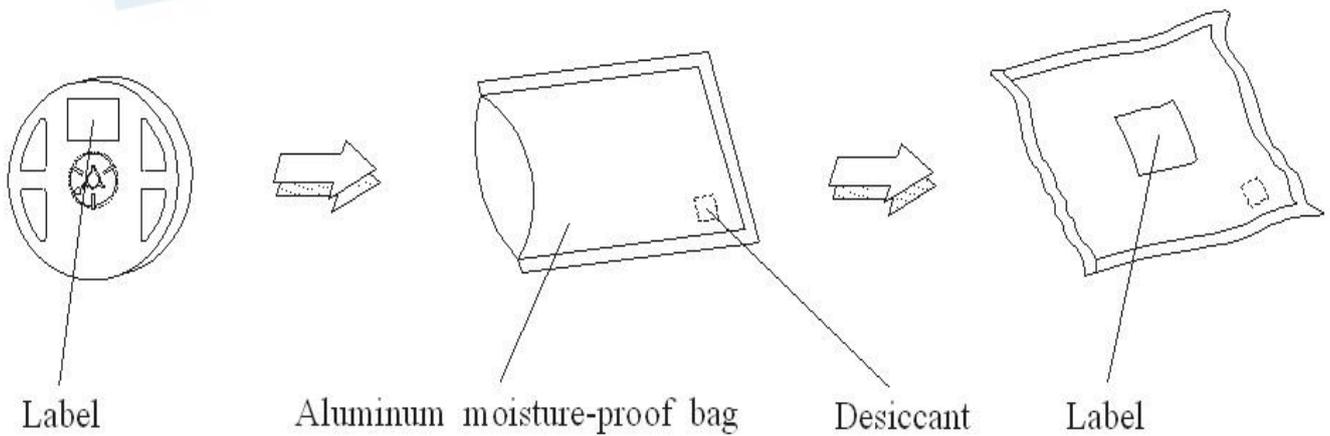
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm ,Unit = mm

## Carrier Tape Dimensions: Loaded Quantity 500 pcs Per Reel



Note: Tolerances unless mentioned  $\pm 0.1$  mm. Unit = mm

## Moisture Resistant Packing Process

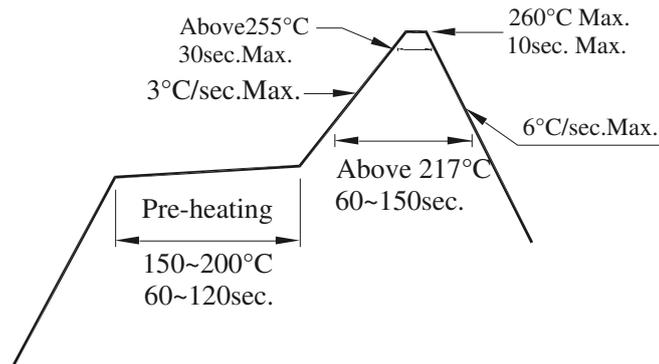


Note: Tolerances unless mentioned  $\pm 0.1$  mm. Unit = mm

## 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.

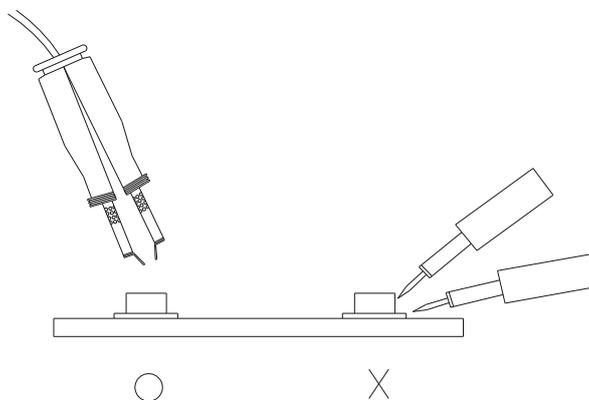
3.4 After soldering, do not warp the circuit board.

### 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.
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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