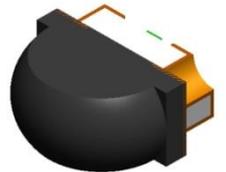


Technical Data Sheet 1.6×0.8mm Package Infrared LED EAISV1608A0

Features

- Peak wavelength $\lambda_p=850\text{nm}$
- Low forward voltage
- Pb free
- The product itself will remain within RoHS compliant version.



Description

- EAISV1608A0 is an infrared emitting diode in miniature SMD package which is molded in a black plastic with semicircle and top view lens. The device is spectrally matched with silicon photodiode and phototransistor.

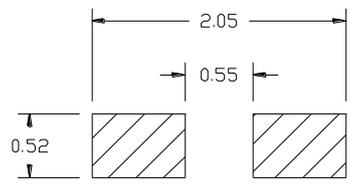
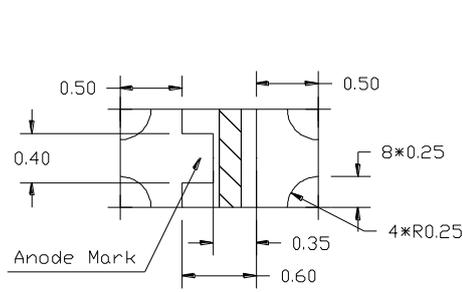
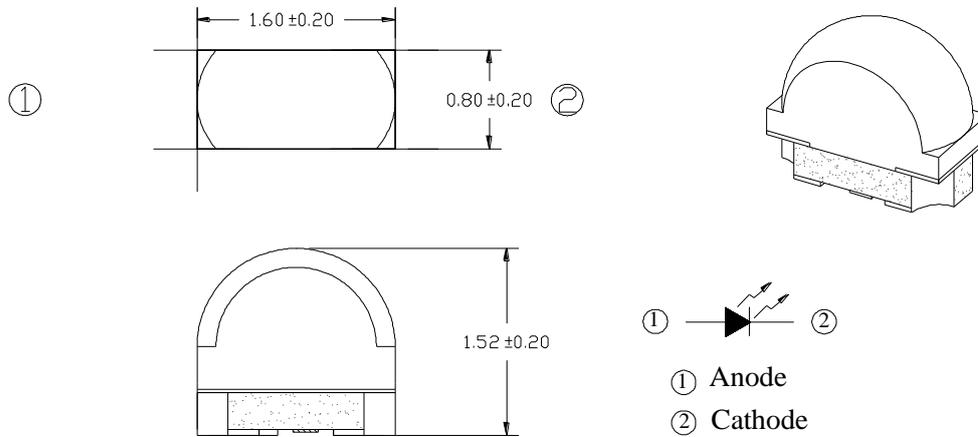
Applications

- Infrared applied system

Device Selection Guide

| Device No. | Chip Material | Lens Color |
|-------------|---------------|------------|
| EAISV1608A0 | GaAlAs | Black |

Package Dimensions



soldering pattern for side looker

- Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions $\pm 0.1\text{mm}$

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|--|-----------|------------|------|
| Continuous Forward Current | I_F | 65 | mA |
| Peak Forward Current *1 | I_{FP} | 1.0 | A |
| Reverse Voltage | V_R | 5 | V |
| Operating Temperature | T_{opr} | -40 ~ +100 | °C |
| Storage Temperature | T_{stg} | -40 ~ +100 | °C |
| Soldering Temperature *2 | T_{sol} | 260 | °C |
| Power Dissipation at(or below) 25°C Free Air Temperature | P_d | 100 | mW |

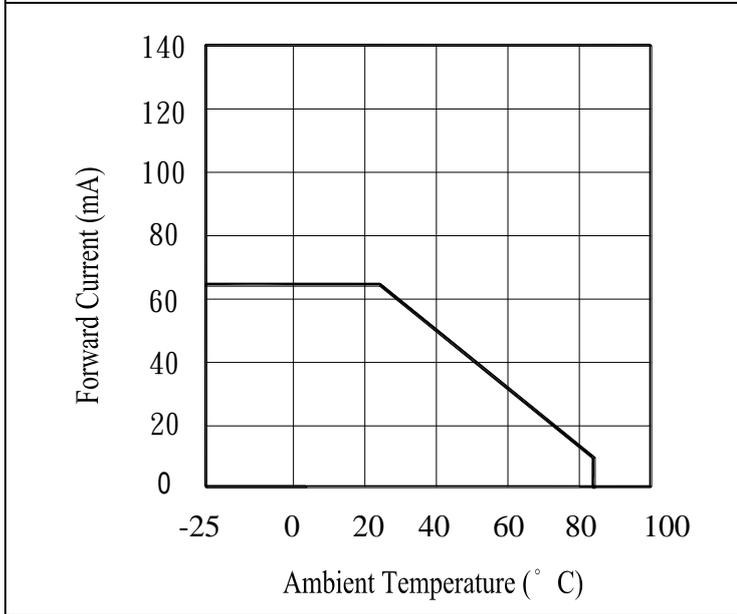
- Notes:** *1: I_{FP} Conditions--Pulse Width $\leq 100\mu s$ and Duty $\leq 1\%$.
*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

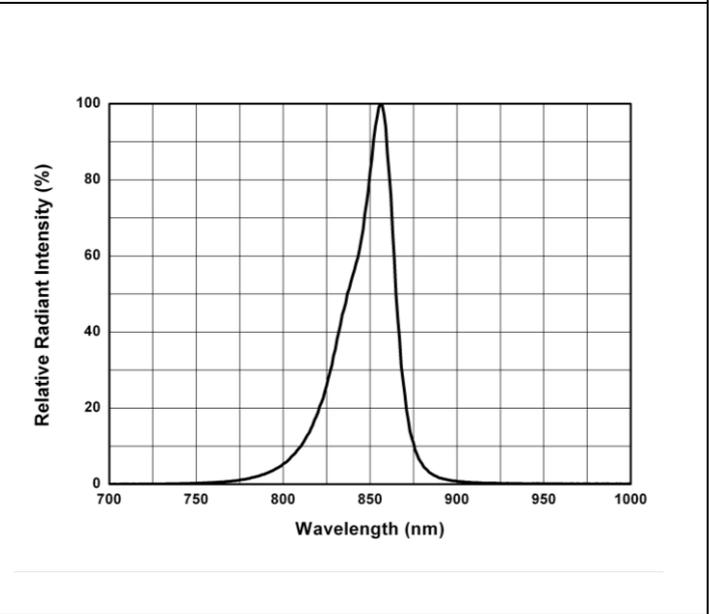
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|--------------------|-------------------|------|------|------|--------|-----------------------|
| Radiant Intensity | I _e | 2.0 | 5.0 | -- | mW /sr | I _F =20mA |
| Peak Wavelength | λ _p | 840 | 850 | 870 | nm | I _F =100mA |
| Spectral Bandwidth | Δλ | -- | 30 | -- | nm | I _F =100mA |
| Forward Voltage | V _F | -- | 1.4 | 1.7 | V | I _F =20mA |
| Reverse Current | I _R | -- | -- | 10 | μA | V _R =5V |
| Rise time | t _r | -- | 16 | -- | ns | I _F =20mA |
| Fall time | t _f | -- | 30 | -- | ns | I _F =20mA |
| View Angle | 2θ _{1/2} | -- | 100 | -- | deg | I _F =20mA |
| | | -- | 40 | -- | | |

Typical Electrical/Optical/Characteristics Curves for IR

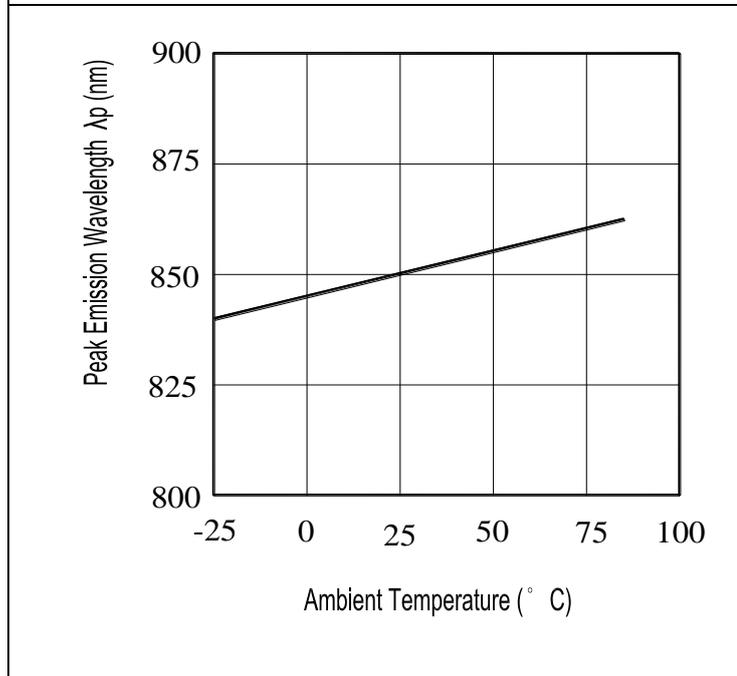
Forward Current vs. Ambient Temperature



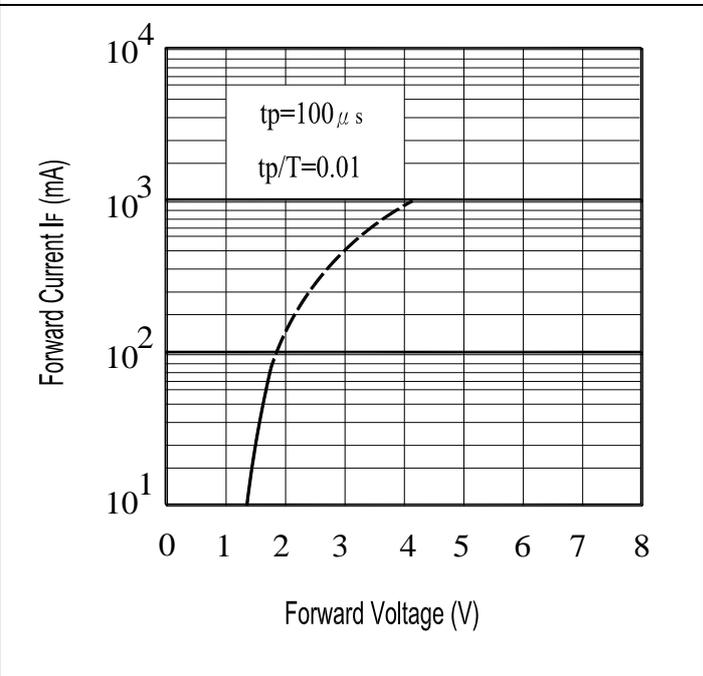
Spectral Distribution



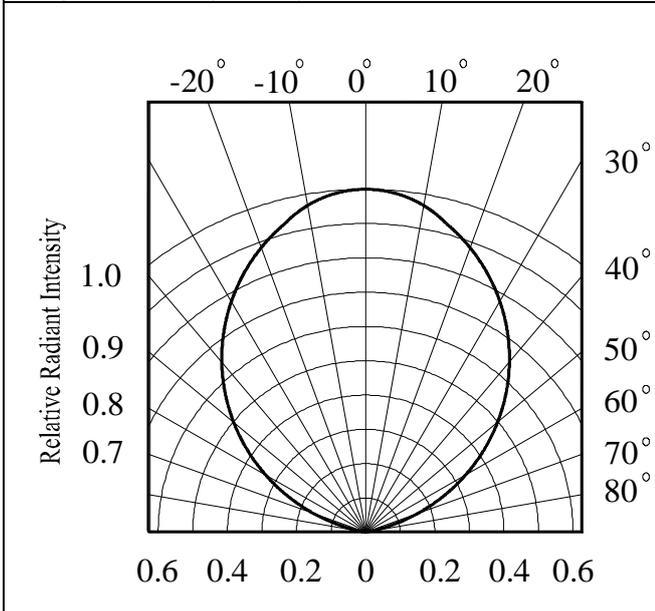
Peak Emission Wavelength vs. Ambient Temperature



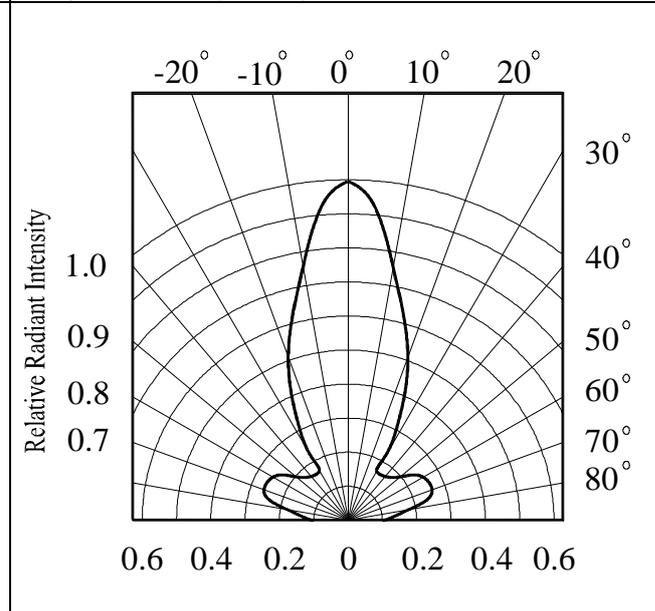
Forward Current vs. Forward Voltage



Relative Radiant Intensity vs. Angular Displacement (X-axis)



Relative Radiant Intensity vs. Angular Displacement (Y-axis)



● **Precautions For Use**

1. Over-current-proof

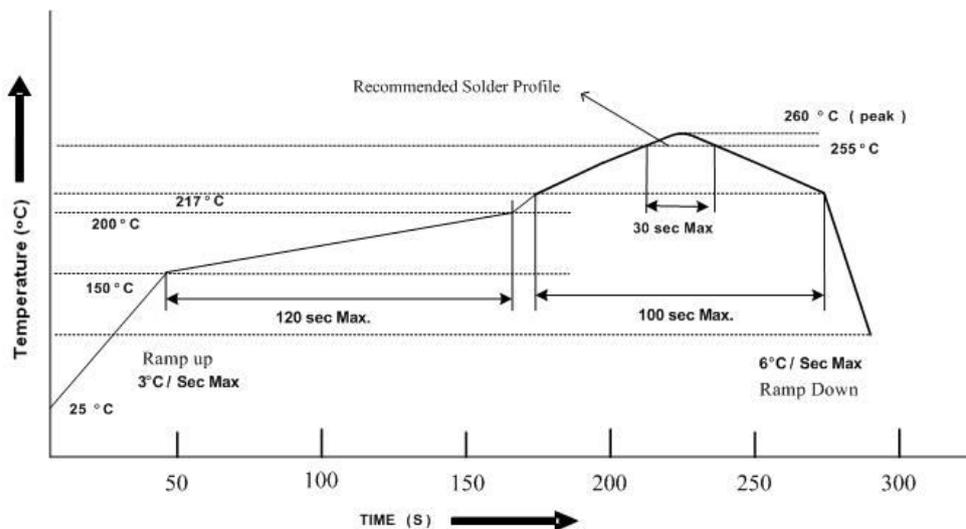
Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

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°C 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°C or less and 60%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°C for Min. 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



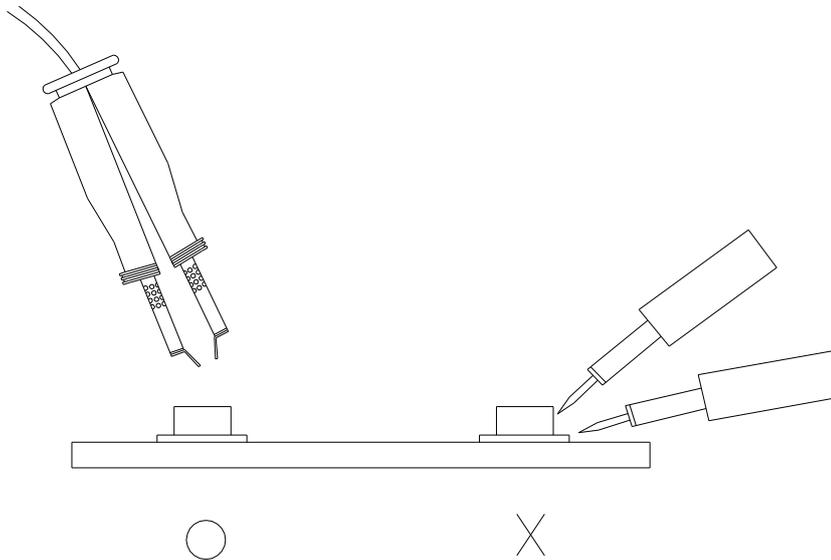
- 3.2 Reflow soldering should not be done more than two times.
- 3.3 When soldering, do not put stress on the LEDs during heating.
- 3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

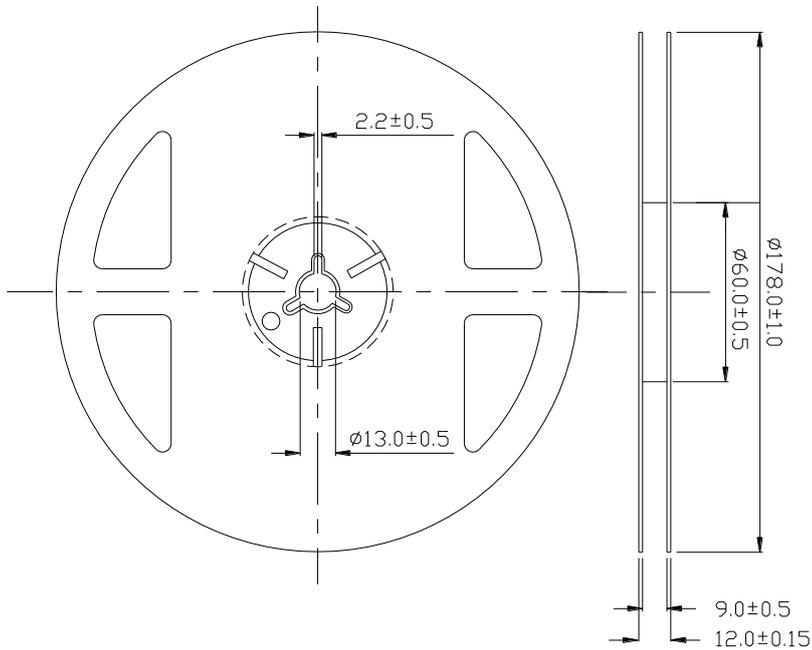
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of 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.

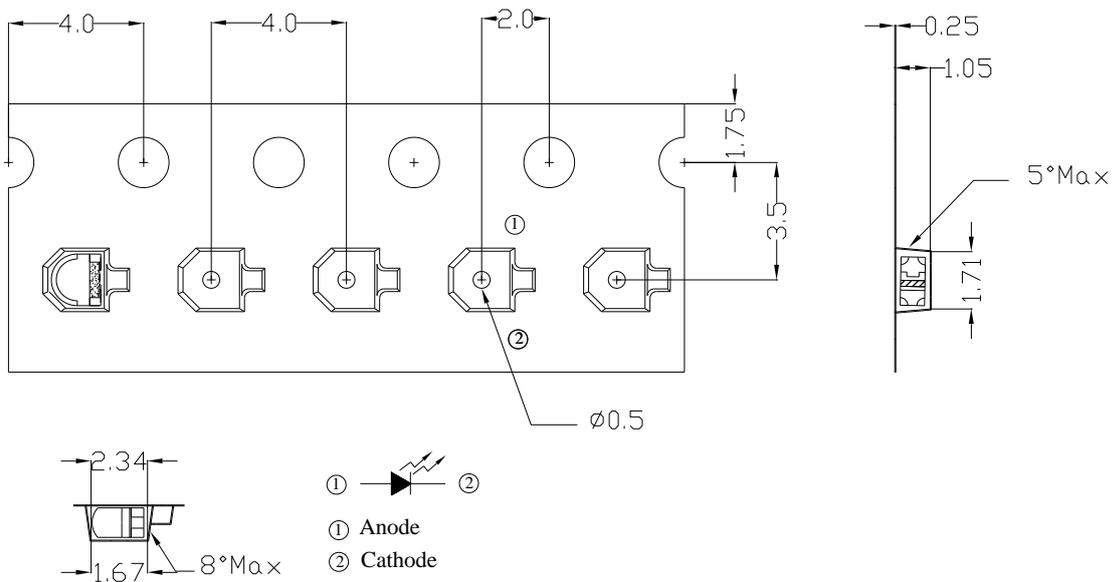


Package Dimensions



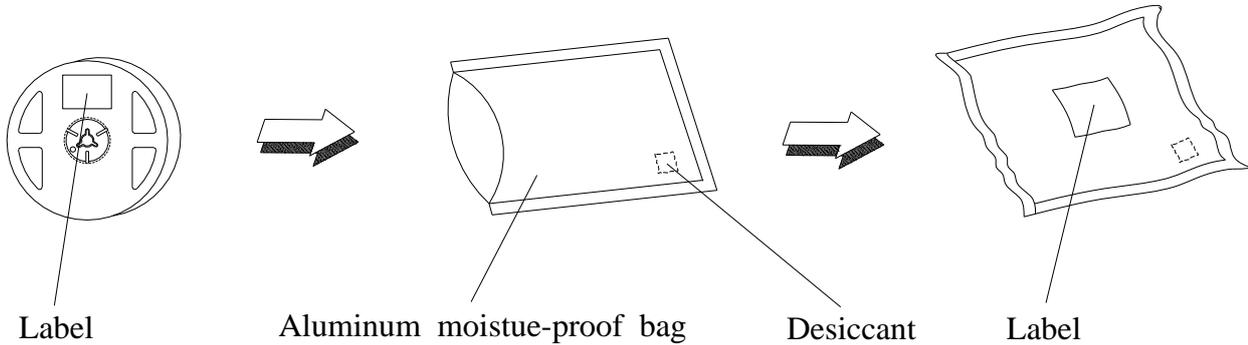
Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

2. Carrier Tape Dimensions:(Quantity: 2000pcs/reel)



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

Packing Procedure



Label Form Specification

The label form is rectangular and contains the following elements from top to bottom:

- A circular logo with 'Pb' and a recycling symbol.
- The 'EVERLIGHT' brand name in a rectangular box.
- A circular logo on the right.
- Text: 'CPN :', 'P/N : XXXXXXXXXXXXXXXX', and a barcode.
- Text: 'XXXXXXXXXXXXXXXXXX'.
- Text: 'QTY : XXX' and 'CAT : XXX'.
- Text: 'HUE : XXX' and 'REF : XXX'.
- Text: 'LOT NO : XXXXXXXXXXXX' and a barcode.
- Text: 'Reference : XXXXXXXX' and a barcode.
- A 'RoHS' logo on the right side.

CPN: Customer's Production Number
P/N : Production Number
QTY: Packing Quantity
CAT: Ranks
HUE: Peak Wavelength
REF: Reference
LOT No: Lot Number
MADE IN TAIWAN: Production Place

Notes

1. Above specification may be changed without notice. Everlight Americas will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Everlight Americas assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of Everlight Americas corporation. Please don't reproduce or cause anyone to reproduce them without Everlight Americas's consent.