

## Features

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 500 pcs / Reel
- MSL (Moisture Sensitivity Level): 3
- AEC-Q102 Qualified
- Halogen-free
- RoHS compliant

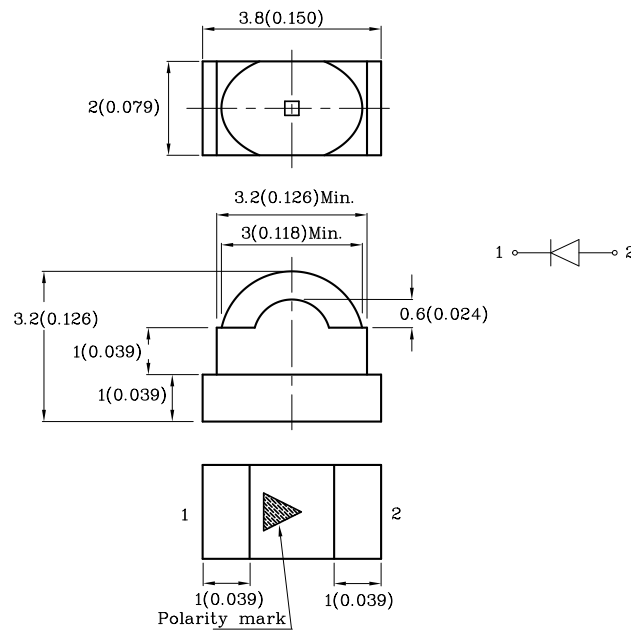


**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

## Applications

- Backlighting for tell-tale indicators
- Dashboard lighting
- Interior lighting (footwell, dome light, accent lighting, etc.)
- Signs and signals
- Various applications requiring high temperature rating

## Package Schematics



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008)$  unless otherwise noted.
3. Specifications are subject to change without notice.

| Part Number     | Emitting Color (Material) | Lens-color  | Luminous Intensity<br>CIE127-2007*<br>(If=20mA)<br>mcd |       |       | Viewing Angle [1]               |
|-----------------|---------------------------|-------------|--------------------------------------------------------|-------|-------|---------------------------------|
|                 |                           |             | Code.                                                  | Min.  | Max.  |                                 |
| XZM2CRK79W-HTAQ | Red (AlGaInP)             | Water Clear | Z                                                      | 2700  | 3100  | 2 θ 1/2<br><br>60°(H)<br>35°(V) |
|                 |                           |             | ZA                                                     | 3100  | 3600  |                                 |
|                 |                           |             | ZB                                                     | 3600  | 4200  |                                 |
|                 |                           |             | ZC                                                     | 4200  | 5000  |                                 |
|                 |                           |             | ZD                                                     | 5000  | 6000  |                                 |
|                 |                           |             | ZE                                                     | 6000  | 7000  |                                 |
|                 |                           |             | T*                                                     | 700*  | 1000* |                                 |
|                 |                           |             | U*                                                     | 1000* | 1300* |                                 |
|                 |                           |             | V*                                                     | 1300* | 1600* |                                 |
|                 |                           |             | W*                                                     | 1600* | 1900* |                                 |
|                 |                           |             | X*                                                     | 1900* | 2300* |                                 |
|                 |                           |             | Y*                                                     | 2300* | 2700* |                                 |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

\* Luminous intensity value is in accordance with CIE127-2007 standards.

2. Listed bin codes represent the possible range for this LED. Actual bin codes received will be based upon production yields.

## Electrical / Optical Characteristics at Ta=25°C

| Parameter                                                     | Symbol   | Value |      |      | Unit  |
|---------------------------------------------------------------|----------|-------|------|------|-------|
|                                                               |          | Min.  | Typ. | Max. |       |
| Wavelength at Peak Emission CIE127-2007* If=20mA              | λpeak    | -     | 635* | -    | nm    |
| Dominant Wavelength CIE127-2007* If=20mA                      | λdom [1] | 610*  | -    | 635* | nm    |
| Spectral Bandwidth at 50%Φ REL MAX If=20mA                    | Δλ       | -     | 20   | -    | nm    |
| Forward Voltage If = 20mA                                     | VF [2]   | -     | 2.0  | 2.5  | V     |
| Reverse Current (VR = 5V)                                     | IR       | -     | -    | 10   | μA    |
| Temperature Coefficient of λpeak If = 20mA, -10°C ≤ T ≤ 100°C | TCλpeak  | -     | 0.11 | -    | nm/°C |
| Temperature Coefficient of λdom If = 20mA, -10°C ≤ T ≤ 100°C  | TCλdom   | -     | 0.06 | -    | nm/°C |
| Temperature Coefficient of VF If = 20mA, -10°C ≤ T ≤ 100°C    | TCV      | -     | -1.5 | -    | mV/°C |

Notes:

1. Wavelength : + / -1nm.

2. Forward Voltage: +/-0.1V.

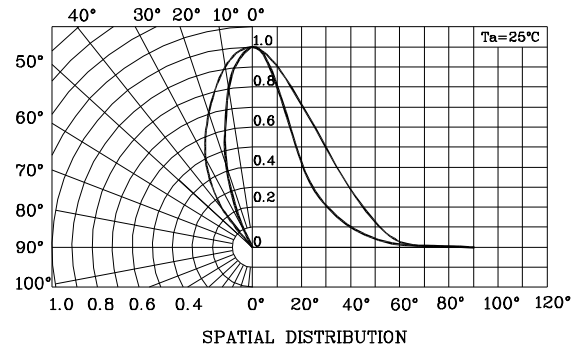
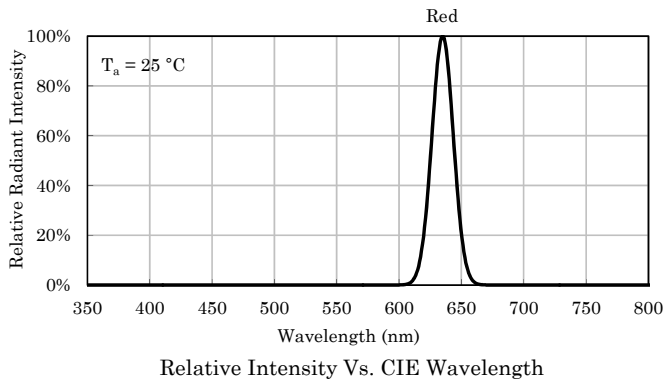
\* Wavelength value is traceable to CIE127-2007 standards.

### Absolute Maximum Ratings at Ta=25°C

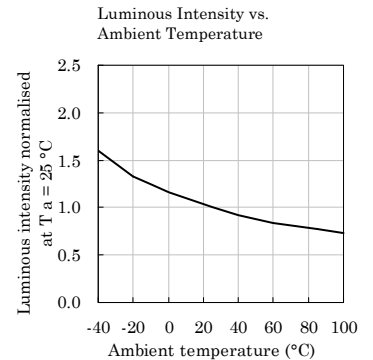
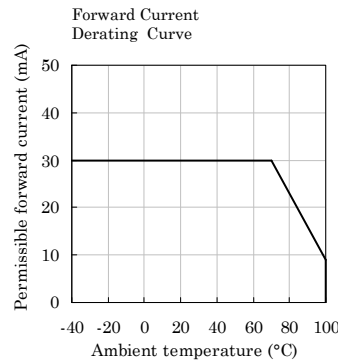
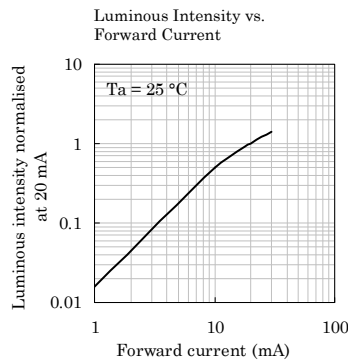
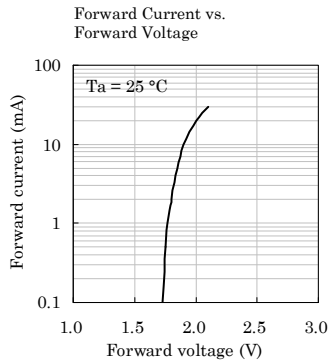
| Parameter                                      | Symbol  | Value      | Unit |
|------------------------------------------------|---------|------------|------|
| Power Dissipation                              | Pd      | 75         | mW   |
| Reverse Voltage                                | VR      | 5          | V    |
| Junction Temperature                           | Tj      | 115        | °C   |
| Operating Temperature                          | Top     | -40 ~ +100 | °C   |
| Storage Temperature                            | Tstg    | -40 ~ +115 | °C   |
| DC Forward Current                             | IF      | 30         | mA   |
| Electrostatic Discharge Threshold (HBM)        |         | 2000       | V    |
| Peak Forward Current [2]                       | IFP     | 150        | mA   |
| Thermal Resistance (Junction/Ambient) [1]      | Rth j-a | 530        | °C/W |
| Thermal Resistance (Junction/Solder point) [1] | Rth j-s | 440        | °C/W |

#### Notes:

1. Rth(j-a), Rth(j-s) Results from mounting on PC board FR4 (pad size ≥ 16 mm<sup>2</sup> per pad).
2. 1/10 Duty Cycle, 0.1ms Pulse Width.
3. A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033).

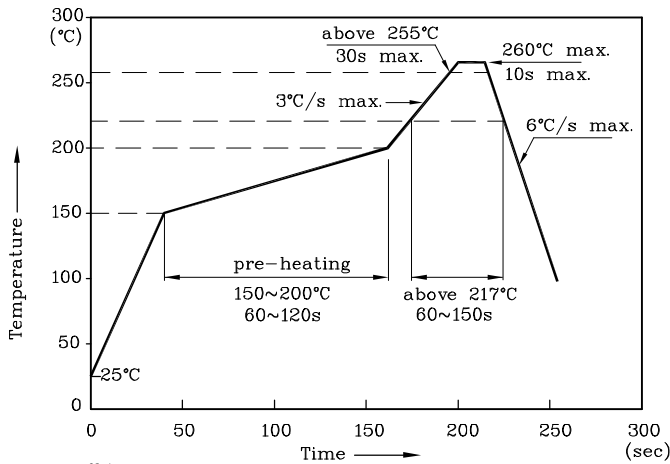


### ❖ Red



- ❖ LED is recommended for reflow soldering and soldering profile is shown below.

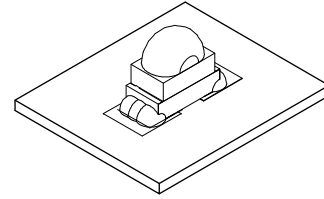
Reflow Soldering Profile for SMD Products (Pb-Free Components)



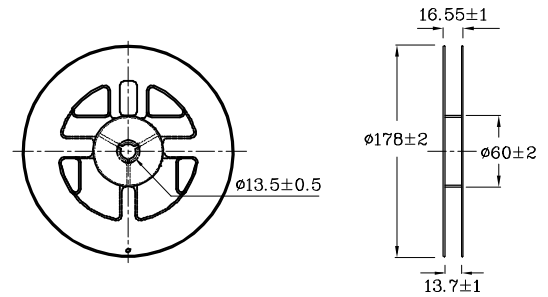
Notes:

1. All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
2. Do not apply any stress to the LED during high temperature conditions.
3. Maximum number of soldering passes: 2

- ❖ The device has a single mounting surface. The device must be mounted according to the specifications.

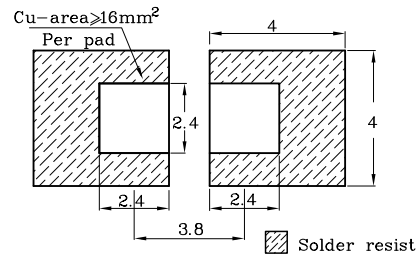
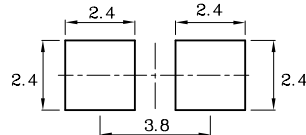


- ❖ Reel Dimension (Units : mm)

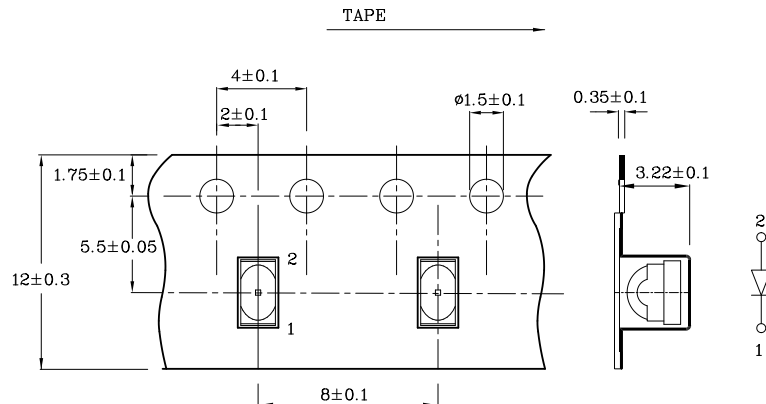


- ❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)

Pad design for improved heat dissipation



- ❖ Tape Specification (Units : mm)



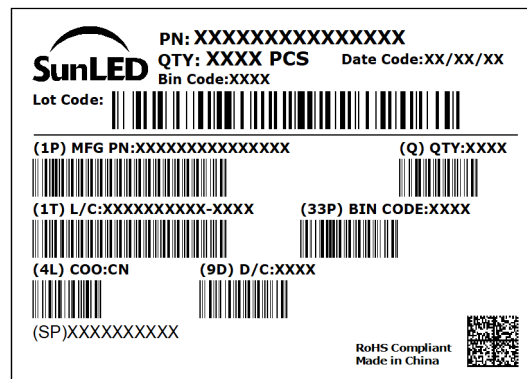
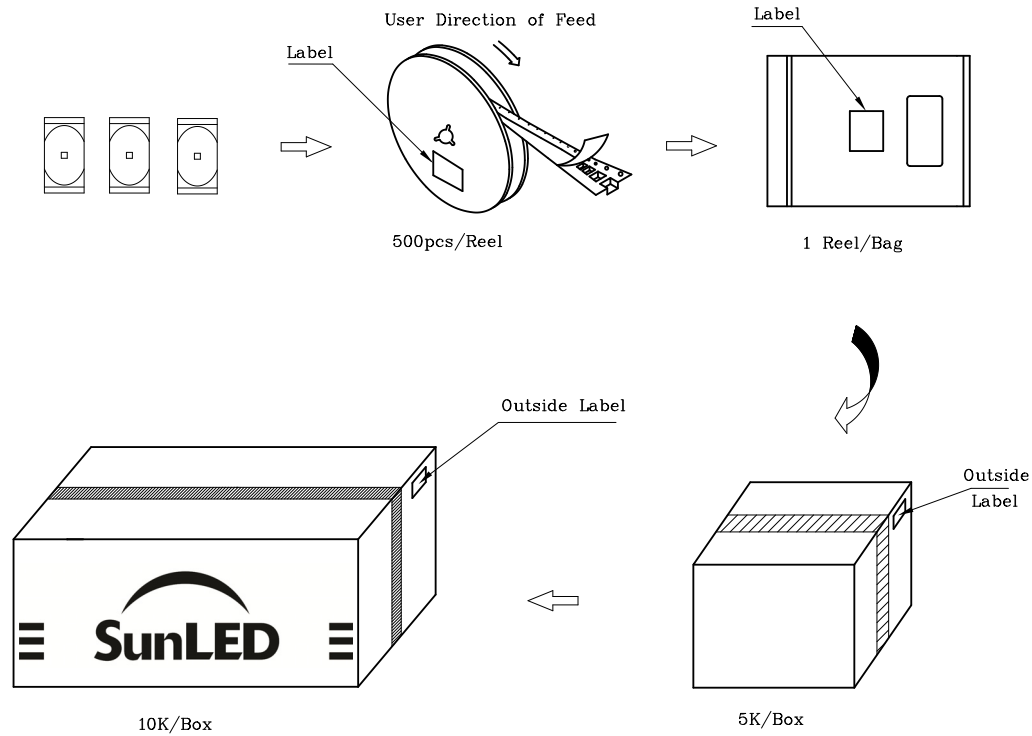
Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

## Packing & Label Specifications



## TERMS OF USE

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