



3.2x1.6mm SMD CHIP LED LAMP

### **Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- RoHS compliant

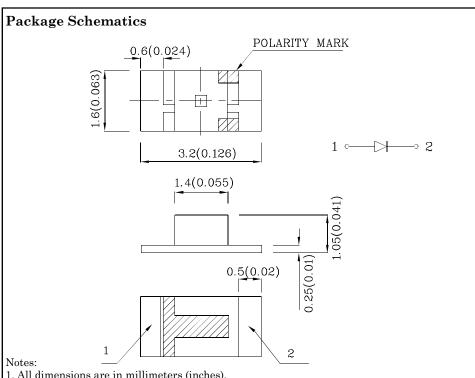






# ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



- 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.

| Absolute Maximum Ratings (TA=25°C)                             |         | FWS<br>(InGaN) | Unit |  |
|--|---------|----------------|------|--|
| Reverse Voltage  | VR      | 5              | V    |  |
| Forward Current  | IF      | 30             | mA   |  |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | ifs 100 |                | mA   |  |
| Power Dissipation  | PD      | 120            | mW   |  |
| Operating Temperature  | TA      | -40 ~ +85      | °C   |  |
| Storage Temperature  | Tstg    | -40 ~ +85      |      |  |
| Electrostatic Discharge Threshold (HBM)                        |         | 250            | V    |  |

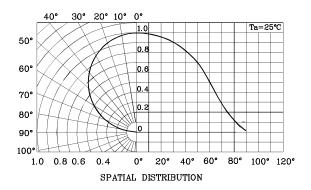
| Operating Characteristics (TA=25°C)                |                  | FWS<br>(InGaN) | Unit |
|--|------------------|----------------|------|
| Forward Voltage (Typ.)<br>(I <sub>F</sub> =20mA)   | $V_{\mathrm{F}}$ | 3.3            | V    |
| Forward Voltage (Max.)<br>(I <sub>F</sub> =20mA)   | $V_{\mathrm{F}}$ | 4              | V    |
| Reverse Current (Max.) $(V_R=5V)$                  | $I_{R}$          | 50             | uA   |
| Chromaticity Coordinates (Typ.)                    | X                | 0.31           |      |
|  | у                | 0.31           |      |
| Capacitance (Typ.)<br>(V <sub>F</sub> =0V, f=1MHz) | C                | 100            | pF   |

| Part<br>Number | Emitting<br>Color | Emitting<br>Material | Lens-color         | $\begin{array}{c} {\rm Luminous\ Intensity}\\ {\rm CIE127\text{-}2007*}\\ {\rm (I_F=20mA)}\\ {\rm mcd} \end{array}$ |      | Viewing<br>Angle<br>20 1/2 |
|----------------|-------------------|----------------------|--------------------|---|------|----------------------------|
|                |                   |                      |                    | min.  | typ. |                            |
| XZFWS55F-2     | White             | InGaN                | Yellow Fluorescent | 400*  | 597* | 120°                       |

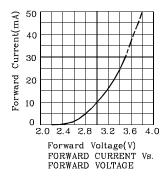
<sup>\*</sup>Luminous intensity value is in accordance with CIE127-2007 standards.

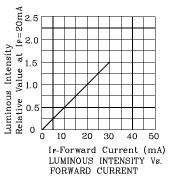


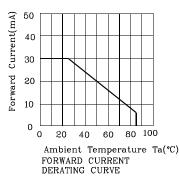


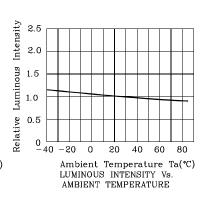


# **\*** FWS



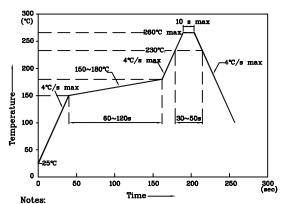






# LED is recommended for reflow soldering and soldering profile is shown below.

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



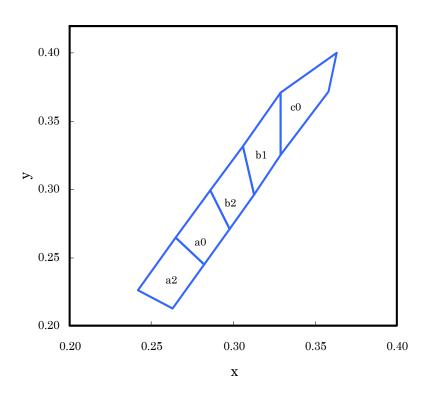
- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions





# XZFWS55F-2

# White CIE



|    | X     | у     |    | X     | У     |    | X     | у     |
|----|-------|-------|----|-------|-------|----|-------|-------|
| a2 | 0.263 | 0.213 | a0 | 0.282 | 0.245 | b2 | 0.298 | 0.271 |
|    | 0.282 | 0.245 |    | 0.298 | 0.271 |    | 0.313 | 0.296 |
|    | 0.265 | 0.265 |    | 0.286 | 0.299 |    | 0.306 | 0.332 |
|    | 0.242 | 0.226 |    | 0.265 | 0.265 |    | 0.286 | 0.299 |
| b1 | 0.313 | 0.296 | c0 | 0.329 | 0.325 |    |       |       |
|    | 0.329 | 0.325 |    | 0.358 | 0.372 |    |       |       |
|    | 0.329 | 0.371 |    | 0.363 | 0.400 |    |       |       |
|    | 0.306 | 0.332 |    | 0.329 | 0.371 |    |       |       |

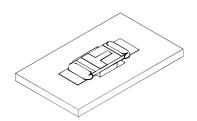
#### Notes:

Shipment may contain more than one chromaticity regions. Orders for single chromaticity region are generally not accepted. Measurement tolerance of the chromaticity coordinates is  $\pm 0.01$ .

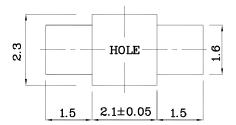




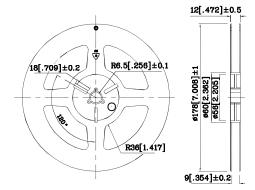
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



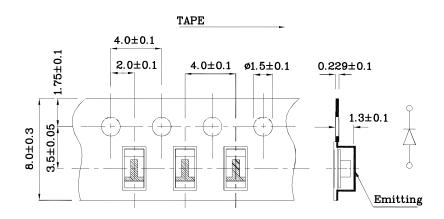
**♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



# **❖** Reel Dimension



# **❖** Tape Specification (Units:mm)



#### Remarks:

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

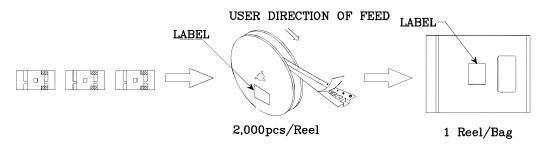
- 1. Measurement tolerance of the chromaticity coordinates is  $\pm 0.01$ .
- 2. Luminous Intensity/ Luminous Flux: +/-15%
- 3. Forward Voltage: +/-0.1V

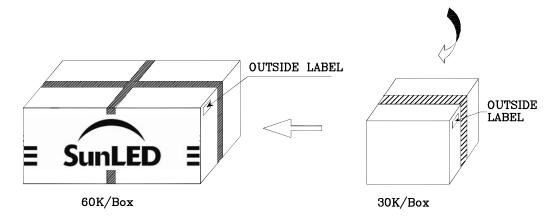
Note: Accuracy may depend on the sorting parameters.

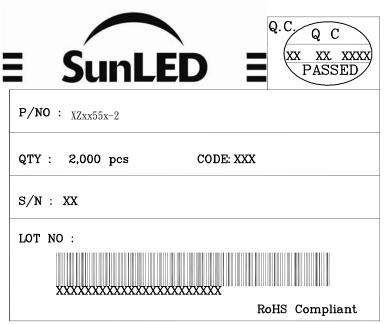




# PACKING & LABEL SPECIFICATIONS







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- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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Feb 17,2014