

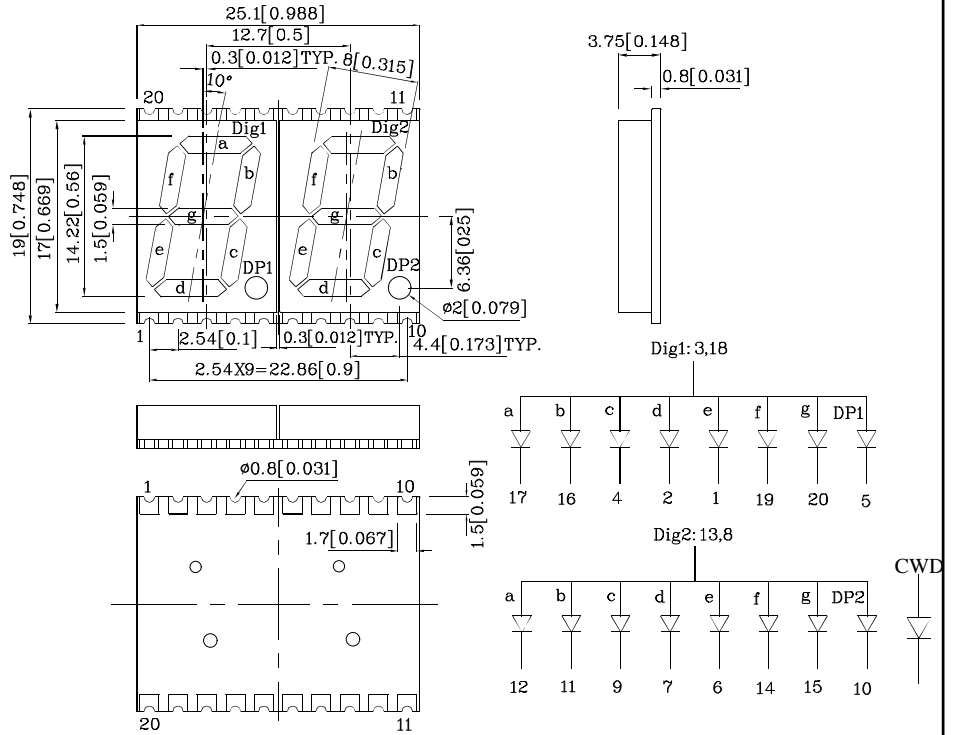
**Features**

- 0.56 inch digit height
- Robust package
- Low power consumption
- Standard configuration: Gray face w/ white segments
- Standard Package: 200pcs/ Reel
- MSL (Moisture Sensitivity Level): 2a
- RoHS Compliant



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

**Package Schematics**



**Notes:**

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.

| Absolute Maximum Ratings<br>( $T_A=25^\circ\text{C}$ )         |           | CWD<br>(InGaN) | Unit |
|--|-----------|----------------|------|
| Reverse Voltage  | $V_R$     | 5              | V    |
| Forward Current  | $I_F$     | 30             | mA   |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | $i_{FS}$  | 150            | mA   |
| Power Dissipation  | $P_D$     | 120            | mW   |
| Operating Temperature  | $T_A$     | -40 ~ +85      | °C   |
| Storage Temperature  | $T_{stg}$ | -40 ~ +85      |      |
| Electrostatic Discharge Threshold<br>(HBM)                     |           | 250            | V    |

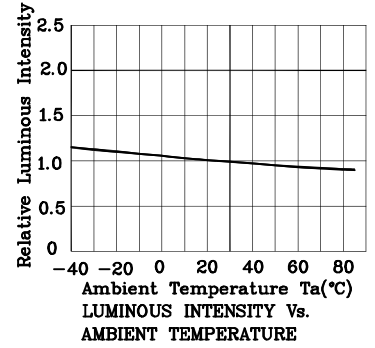
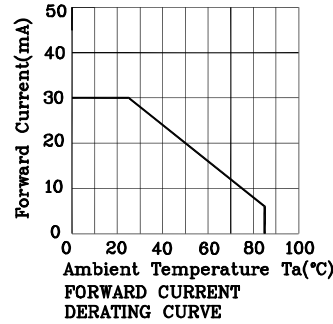
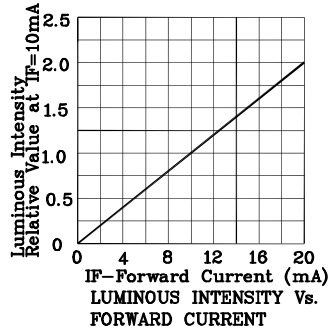
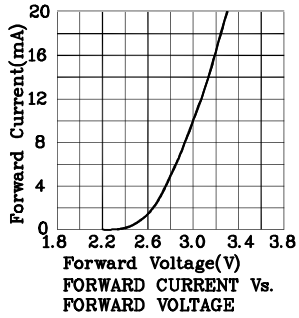
| Operating Characteristics<br>( $T_A=25^\circ\text{C}$ )     |       | CWD<br>(InGaN) | Unit          |
|---|-------|----------------|---------------|
| Forward Voltage (Typ.)<br>( $I_F=10\text{mA}$ )             | $V_F$ | 3.0            | V             |
| Forward Voltage (Max.)<br>( $I_F=10\text{mA}$ )             | $V_F$ | 4.0            | V             |
| Reverse Current (Max.)<br>( $V_R=5\text{V}$ )               | $I_R$ | 50             | $\mu\text{A}$ |
| Chromaticity Coordinates<br>(Typ.)                          | X     | 0.31           |               |
|   | Y     | 0.31           |               |
| Capacitance (Typ.)<br>( $V_F=0\text{V}$ , $f=1\text{MHz}$ ) | C     | 100            | pF            |

| Part Number | Emitting Color | Emitting Material | Luminous Intensity<br>CIE127-2007*<br>( $I_F=10\text{mA}$ )<br>ucd |        | Description                    |
|-------------|----------------|-------------------|--|--------|--------------------------------|
|             |                |                   | min.   | typ.   |                                |
| XZFCWD14A2  | White          | InGaN             | 21000*   | 37990* | Common Anode, Rt.Hand Decimal. |

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

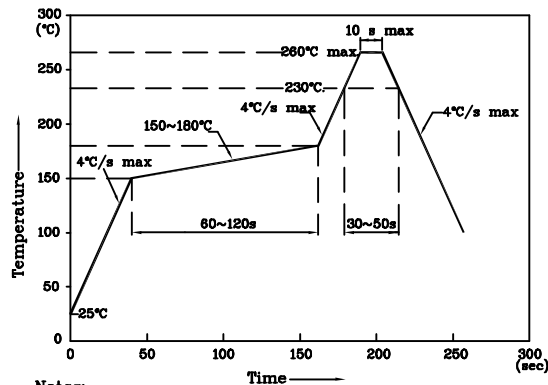


❖ CWD



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

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



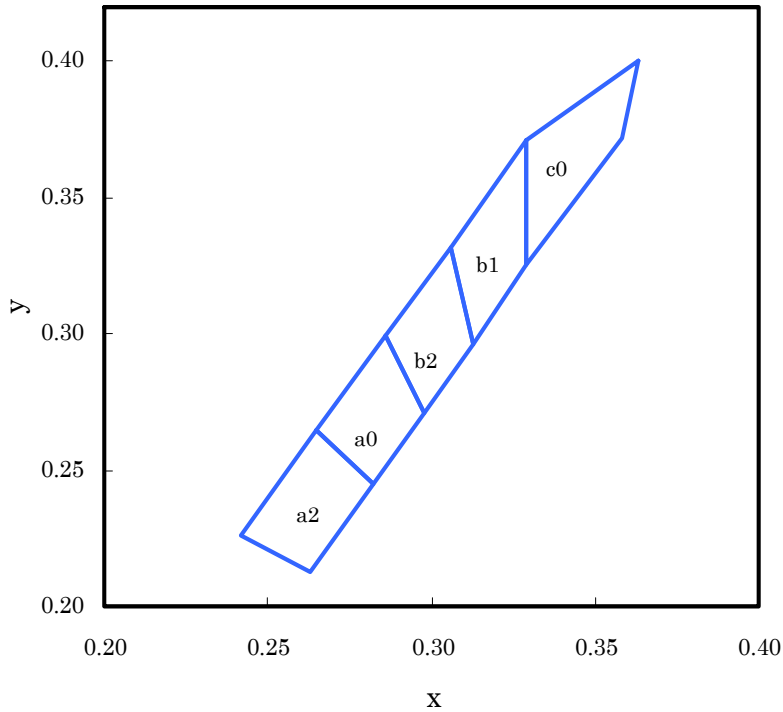
Notes:

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



XZFCWD14A2

White CIE

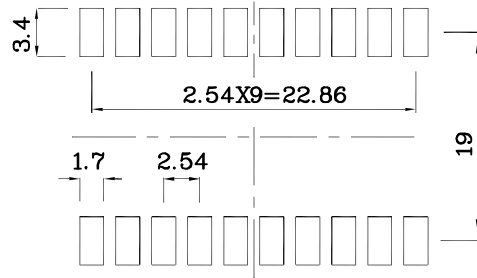


|    | x     | y     |    | x     | y     |    | x     | y     |
|----|-------|-------|----|-------|-------|----|-------|-------|
| a2 | 0.263 | 0.213 | a0 | 0.282 | 0.245 | b2 | 0.298 | 0.271 |
|    | 0.282 | 0.245 |    | 0.298 | 0.271 |    | 0.313 | 0.296 |
|    | 0.265 | 0.265 |    | 0.286 | 0.299 |    | 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 |    |       |       |

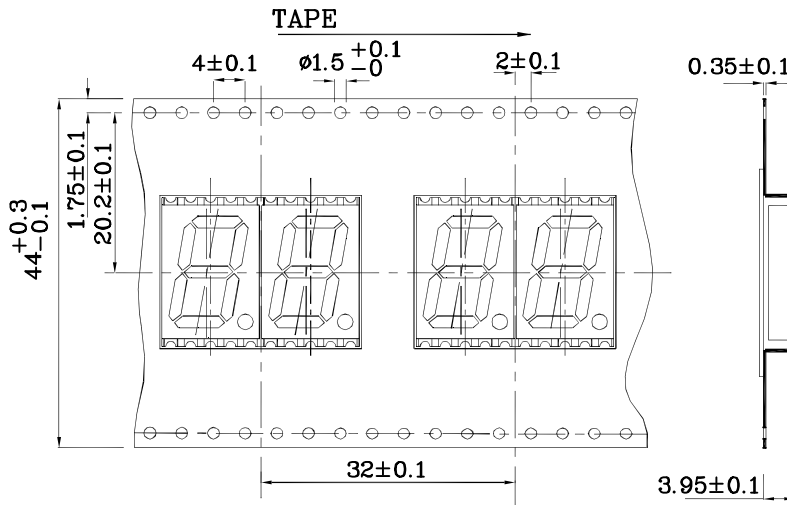
Notes:  
Shipment may contain more than one chromaticity regions.  
Orders for single chromaticity region are generally not accepted.  
Measurement tolerance of the chromaticity coordinates is  $\pm 0.01$ .



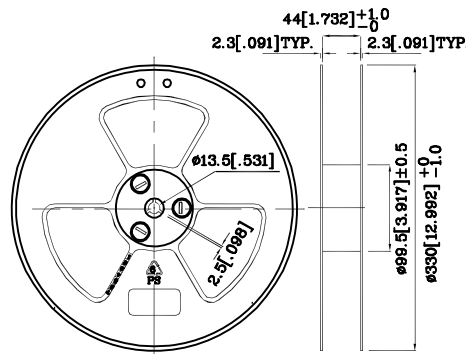
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ±0.15)**



❖ **Tape Specification (Units : mm)**



❖ **Reel Dimension**



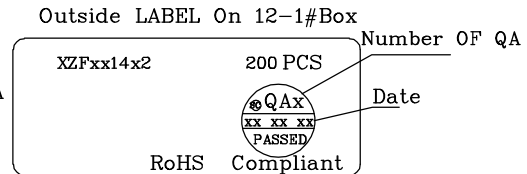
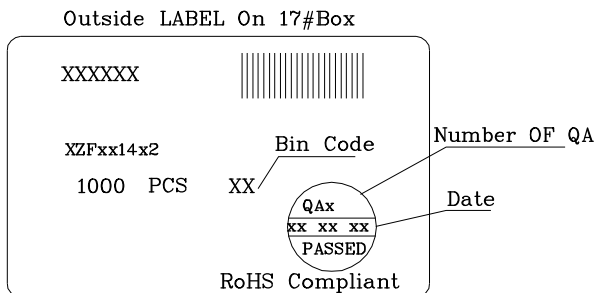
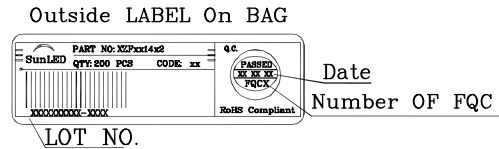
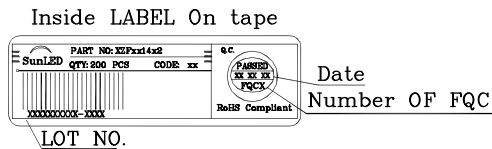
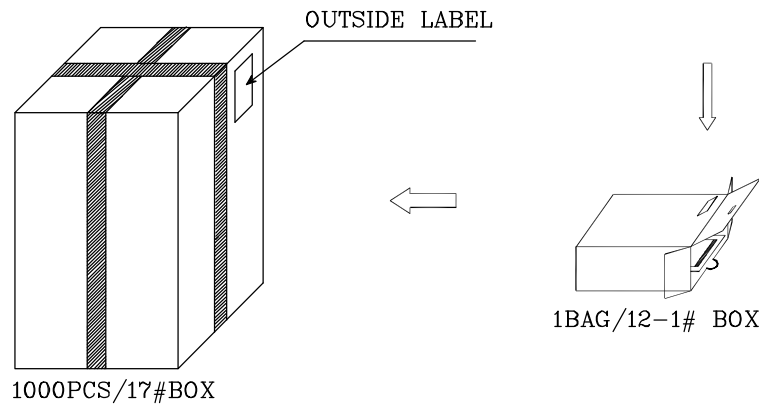
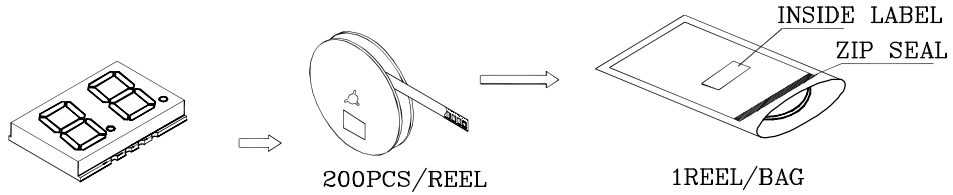
Remarks:

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 ±0.01.
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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2. Contents within this document are subject to improvement and enhancement changes without notice.
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