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#### Part Number: XZFBBA05C2

SURFACE MOUNT DISPLAY

#### **Features**

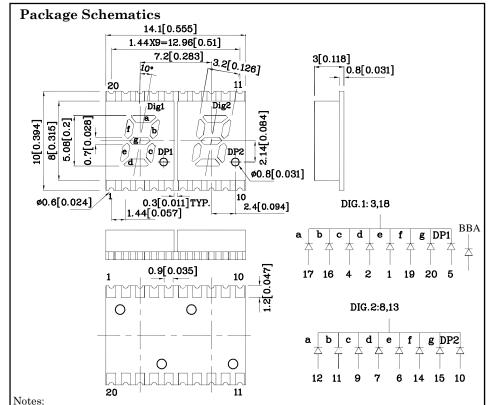
- 0.2 inch digit height
- Robust package
- Low power consumption
- Standard configuration: Gray face w/ white segments
- Standard Package: 300pcs/ ReelMSL (Moisture Sensitivity Level): 2a
- RoHS Compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



- 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 (T <sub>A</sub> =25°C)                |                   | BBA<br>(InGaN) | Unit |  |
|--|-------------------|----------------|------|--|
| Reverse Voltage  | $V_{\mathrm{R}}$  | 5              | V    |  |
| Forward Current  | $I_{\mathrm{F}}$  | 30             | mA   |  |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | $i_{\mathrm{FS}}$ | 100            | mA   |  |
| Power Dissipation  | $P_{D}$           | 120            | mW   |  |
| Operating Temperature  | $T_{\rm A}$       | -40 ~ +85      | °C   |  |
| Storage Temperature  | Tstg              | -40 ~ +85      | -0   |  |
| Electrostatic Discharge Threshold (HBM)                        |                   | 1000           | V    |  |

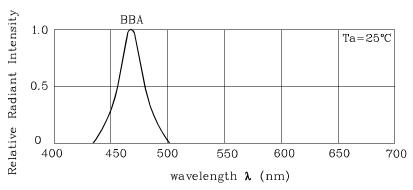
| Operating Characteristics (T <sub>A</sub> =25°C)                                 |                     | BBA<br>(InGaN) | Unit |
|--|---------------------|----------------|------|
| Forward Voltage (Typ.)<br>(I <sub>F</sub> =10mA)                                 | $V_{\mathrm{F}}$    | 3.05           | V    |
| Forward Voltage (Max.)<br>(I <sub>F</sub> =10mA)                                 | $V_{\mathrm{F}}$    | 4              | V    |
| Reverse Current (Max.) $(V_R=5V)$  | $I_R$               | 10             | uA   |
| Wavelength of Peak Emission CIE127-2007* (Typ.) $(I_F=10\text{mA})$              | λΡ                  | 468*           | nm   |
| Wavelength of Dominant<br>Emission CIE127-2007* (Typ.)<br>(I <sub>F</sub> =10mA) | λD                  | 465*           | nm   |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>(I <sub>F</sub> =10mA)     | $\triangle \lambda$ | 21             | nm   |
| Capacitance (Typ.)<br>(V <sub>F</sub> =0V, f=1MHz)                               | С                   | 100            | pF   |

| Part<br>Number | Emitting<br>Color | Emitting<br>Material | Luminous Intensity<br>CIE127-2007*<br>(I <sub>F</sub> =10mA) ucd |       | Wavelength<br>CIE127-2007*<br>nm λP | Description                         |
|----------------|-------------------|----------------------|--|-------|-------------------------------------|-------------------------------------|
|                |                   |                      | min.   | typ.  |                                     |                                     |
| XZFBBA05C2     | Blue              | InGaN                | 2200*  | 4290* | 468*                                | Common Cathode,<br>Rt.Hand Decimal. |

<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Jan 07.2014

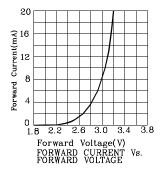


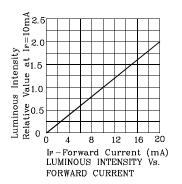


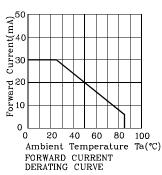


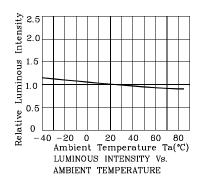
RELATIVE INTENSITY Vs. CIE WAVELENGTH

#### **❖** BBA



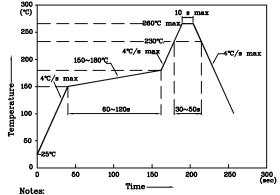






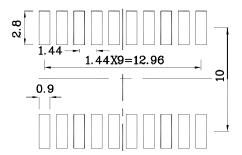
# LED is recommended for reflow soldering and soldering profile is shown below.

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



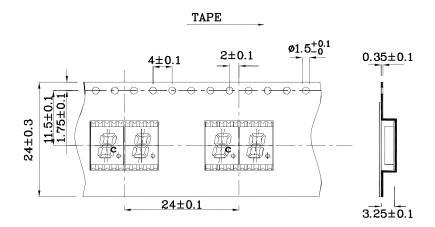
- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions

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

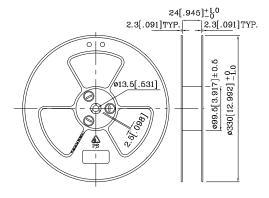


## **❖** Tape Specification (Units:mm)

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#### \* Reel Dimension



#### 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:

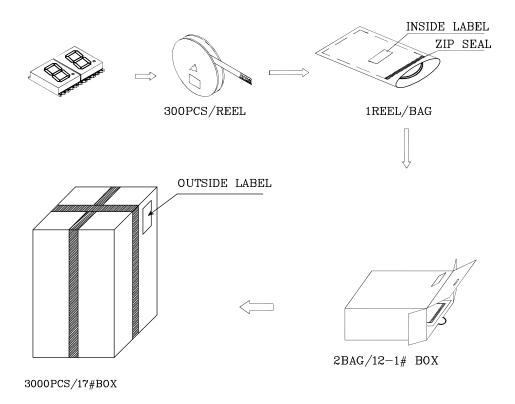
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

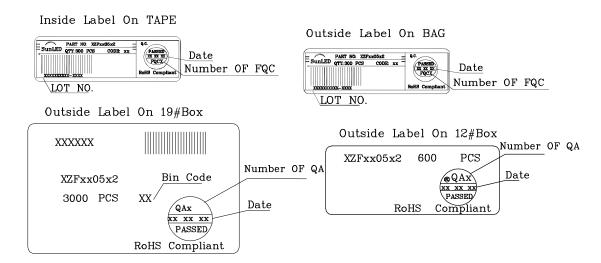
Note: Accuracy may depend on the sorting parameters.





#### PACKING & LABEL SPECIFICATIONS





#### TERMS OF USE

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