

Part Number: KCDA03-106

Super Bright Orange

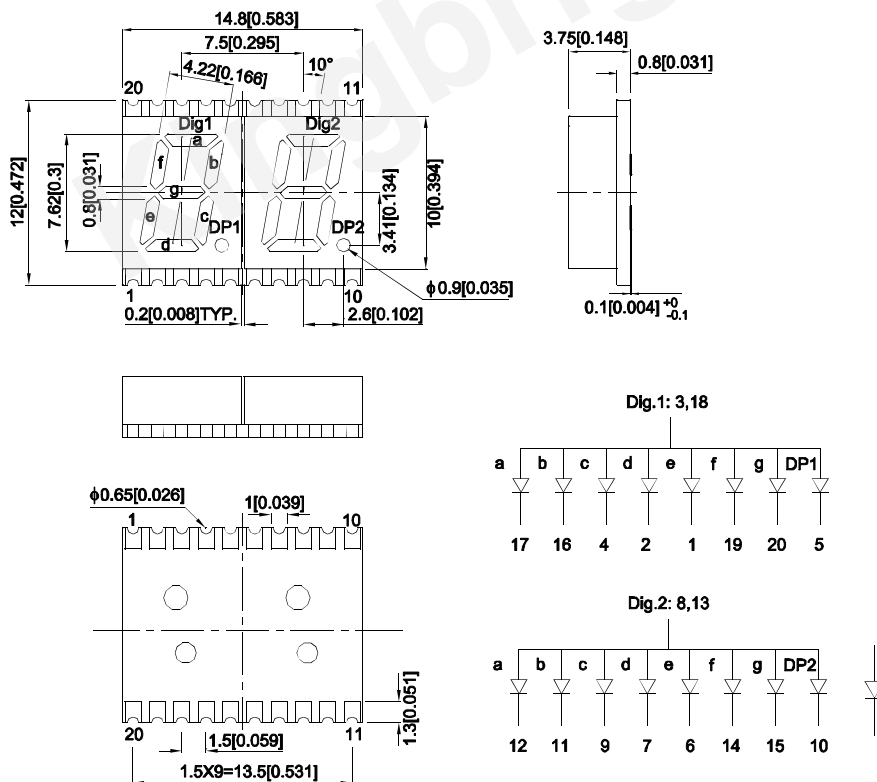
### Features

- 0.3 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Package :300pcs / reel.
- Gray face, white segment.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

### Description

The Super Bright Orange device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

### Package Dimensions& Internal Circuit Diagram



#### Notes:

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



## Selection Guide

| Part No.   | Emitting Color (Material)     | Lens Type      | Iv (ucd) [1]<br>@ 10mA |        | Description                        |
|------------|-------------------------------|----------------|------------------------|--------|------------------------------------|
|            |                               |                | Min.                   | Typ.   |                                    |
| KCDA03-106 | Super Bright Orange (AlGaInP) | White Diffused | 21000                  | 46000  | Common Anode, Rt.<br>Hand Decimal. |
|            |                               |                | *5600                  | *11000 |                                    |

Notes:

- Luminous intensity / luminous Flux: +/-15%.
- \* Luminous intensity value is traceable to CIE127-2007 standards.

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

| Symbol                | Parameter                | Emitting Color      | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|---------------------|------|------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Orange | 610  |      | nm    | IF=10mA         |
| $\lambda_D$ [1]       | Dominant Wavelength      | Super Bright Orange | 601  |      | nm    | IF=10mA         |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Orange | 29   |      | nm    | IF=10mA         |
| C                     | Capacitance              | Super Bright Orange | 15   |      | pF    | VF=0V;f=1MHz    |
| VF [2]                | Forward Voltage          | Super Bright Orange | 2    | 2.5  | V     | IF=10mA         |
| IR                    | Reverse Current          | Super Bright Orange |      | 10   | uA    | VR=5V           |

Notes:

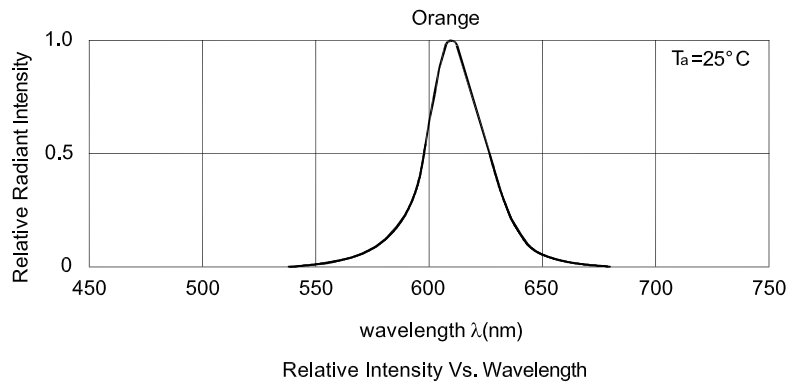
- Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.
- Wavelength value is traceable to CIE127-2007 standards.
- Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

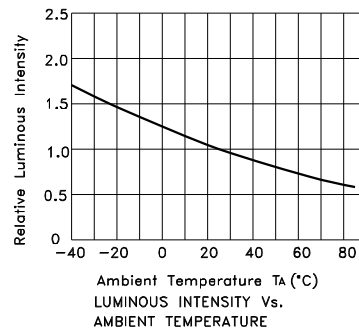
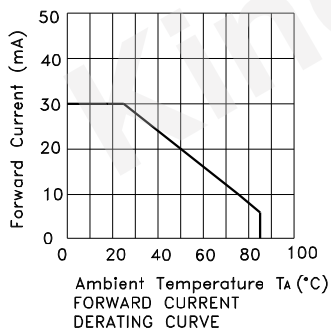
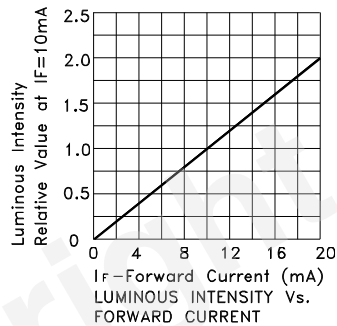
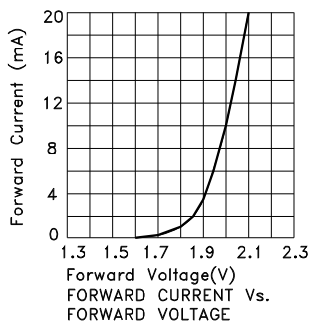
| Parameter                       | Values         | Units |
|---------------------------------|----------------|-------|
| Power dissipation               | 75             | mW    |
| DC Forward Current              | 30             | mA    |
| Peak Forward Current [1]        | 195            | mA    |
| Reverse Voltage                 | 5              | V     |
| Operating / Storage Temperature | -40°C To +85°C |       |

Notes:

- 1/10 Duty Cycle, 0.1ms Pulse Width.
- Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

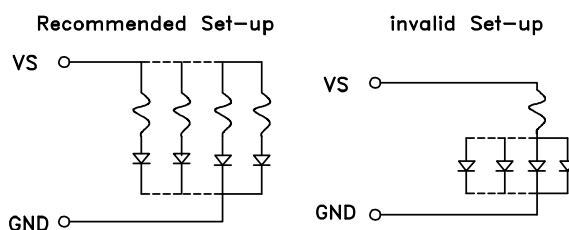


## Super Bright Orange KCDA03-106



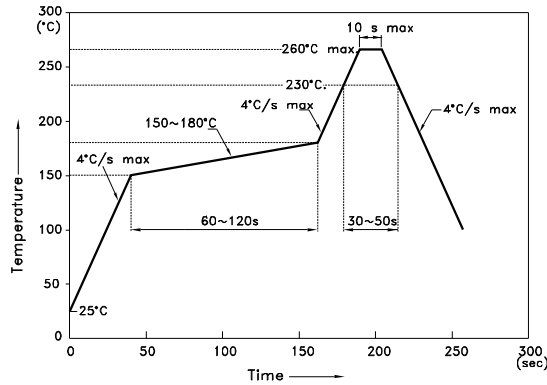
## CIRCUIT DESIGN NOTES

1. Protective current-limiting resistors may be necessary to operate the Displays.
2. LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.



KCDA03-106

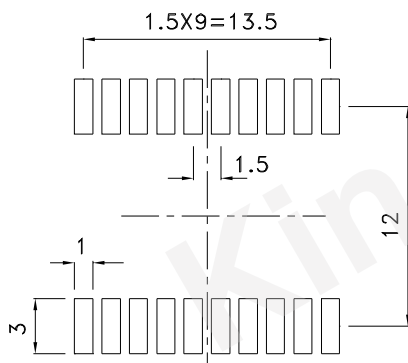
Reflow Soldering Profile For Lead-free SMT Process.



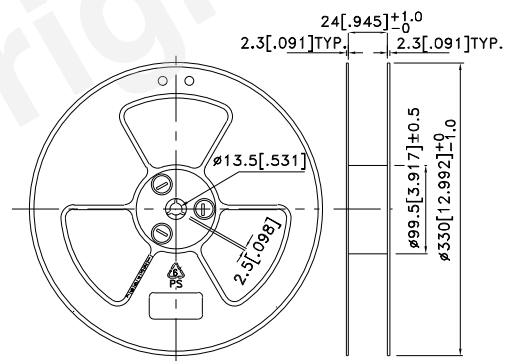
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

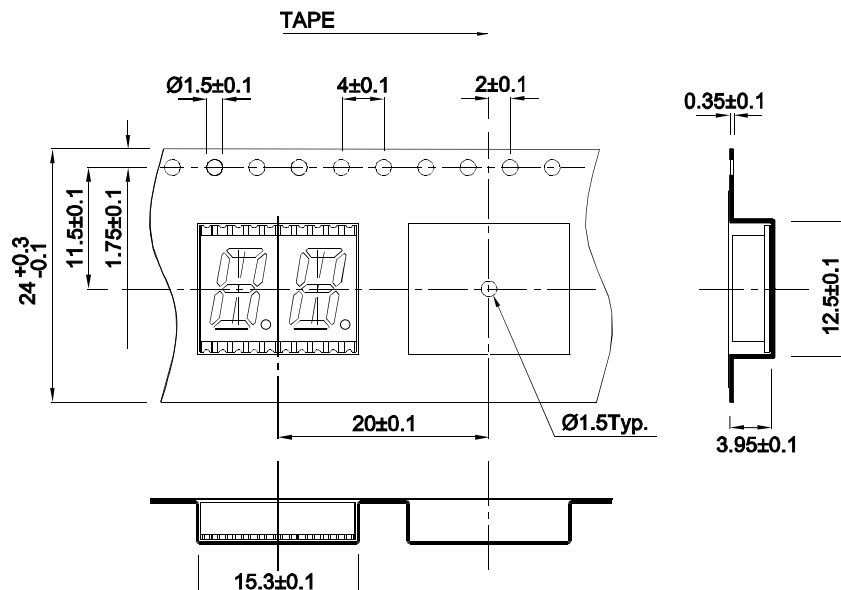
Recommended Soldering Pattern  
(Units : mm; Tolerance: ± 0.15)



Reel Dimension

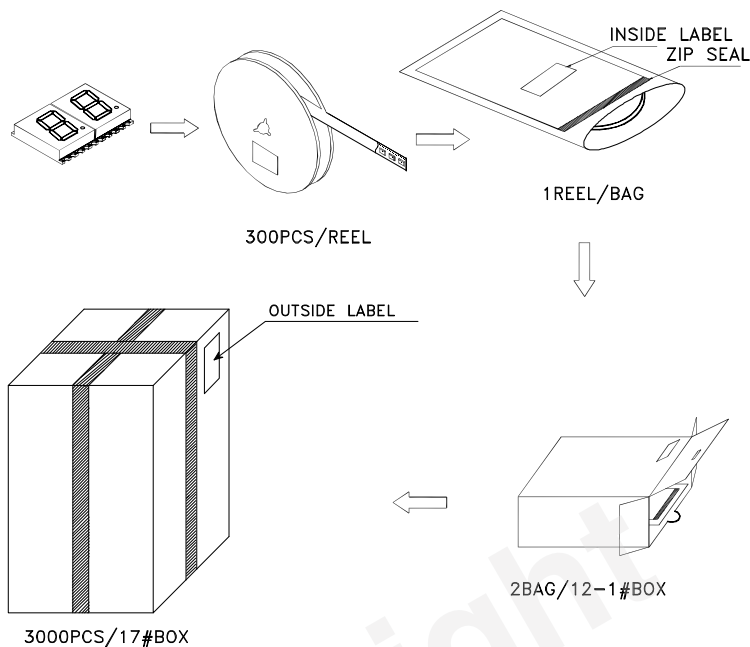


Tape Specifications  
(Units : mm)

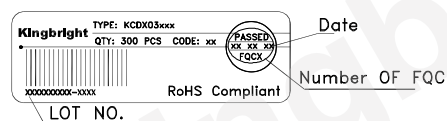


## PACKING & LABEL SPECIFICATIONS

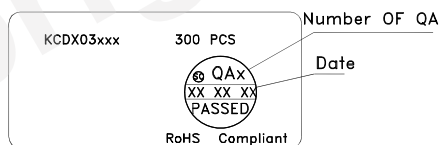
## KCDA03-106



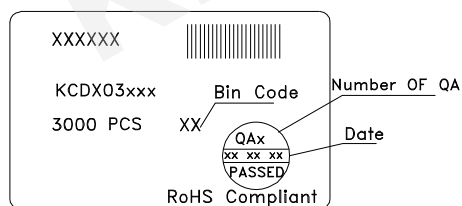
Inside Label On Tape



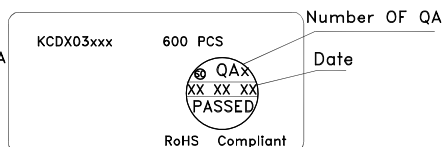
Outside Label On Bag



Outside Label On 17#Box



Outside Label On 12-1#Box



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