

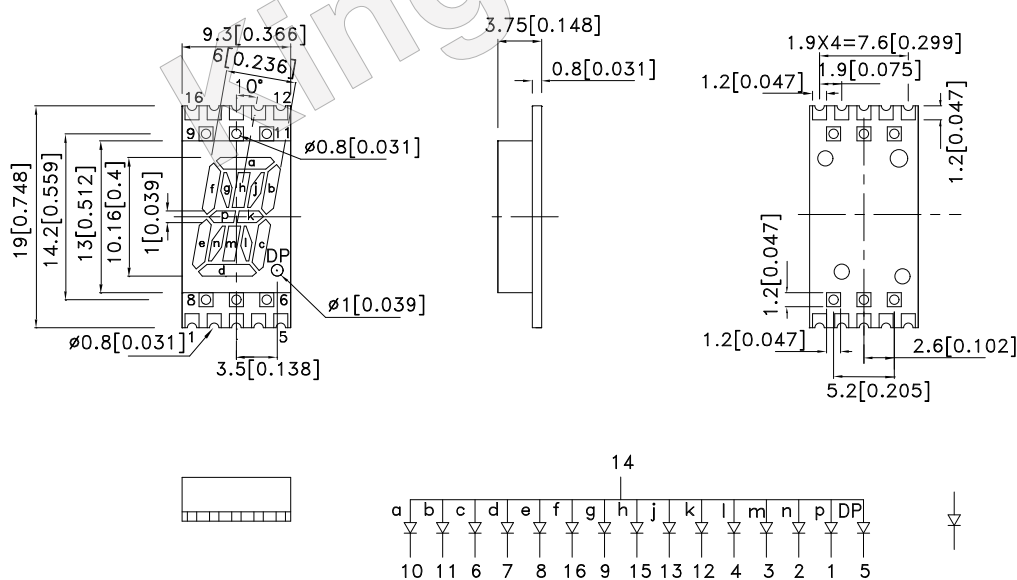
Features

- 0.4 inch character height.
- Low current operation.
- High contrast and light output.
- Categorized for luminous intensity.
- Mechanically rugged.
- Gray face, white segment.
- Package : 400pcs / reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

Description

The Super Bright Yellow 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] @ 10mA | | Description |
|-------------|-------------------------------|----------------|------------------------|--------|------------------------------------|
| | | | Min. | Typ. | |
| KCPSA04-107 | Super Bright Yellow (AlGaInP) | White Diffused | 21000 | 46000 | Common Anode, Rt. Hand Decimal. |
| | | | *5600 | *12000 | |

Notes:

1. 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 |
|-----------------------|--------------------------|---------------------|------|------|-------|-----------------|
| λ_{peak} | Peak Wavelength | Super Bright Yellow | 590 | | nm | IF=10mA |
| λ_D [1] | Dominant Wavelength | Super Bright Yellow | 590 | | nm | IF=10mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Yellow | 20 | | nm | IF=10mA |
| C | Capacitance | Super Bright Yellow | 20 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Super Bright Yellow | 1.95 | 2.5 | V | IF=10mA |
| IR | Reverse Current | Super Bright Yellow | | 10 | uA | VR=5V |

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

3. Wavelength value is traceable to CIE127-2007 standards.

4. 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

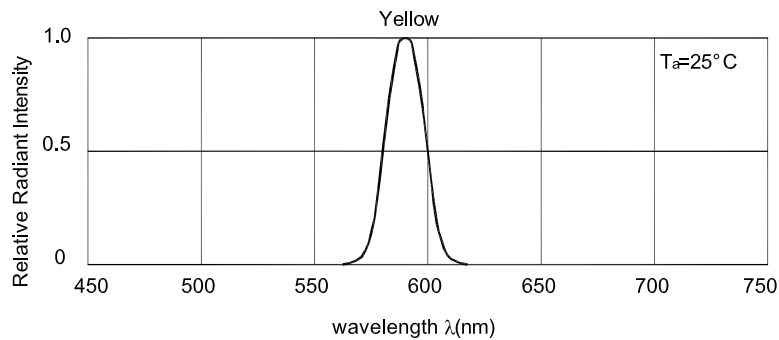
| Parameter | Values | Units |
|---------------------------------|----------------|-------|
| Power dissipation | 75 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 175 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | |

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.

2. 2mm below package base.

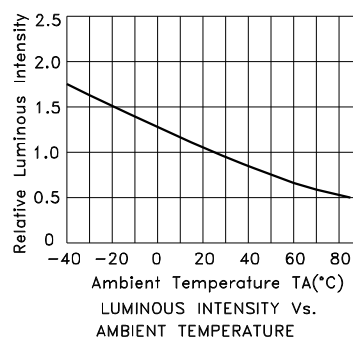
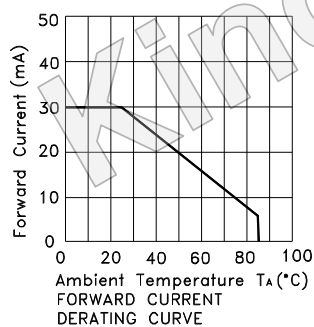
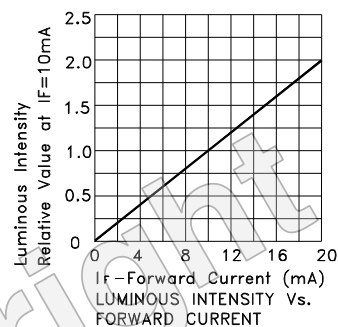
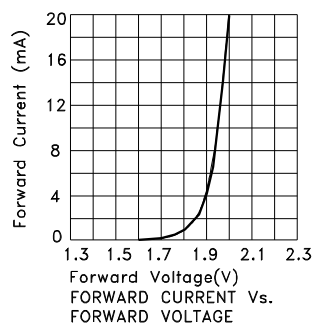
3. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



Relative Intensity Vs. Wavelength

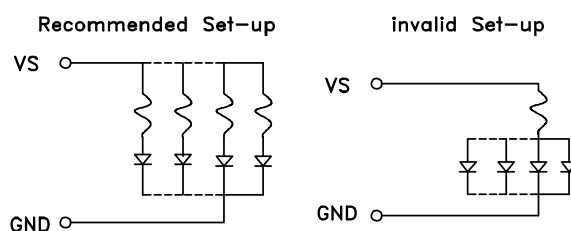
Super Bright Yellow

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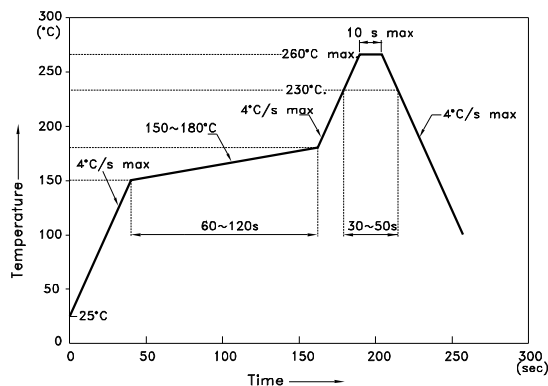
CIRCUIT DESIGN NOTES

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.



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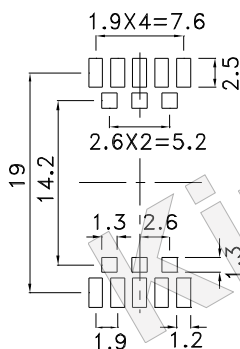
Reflow Soldering Profile For Lead-free SMT Process.



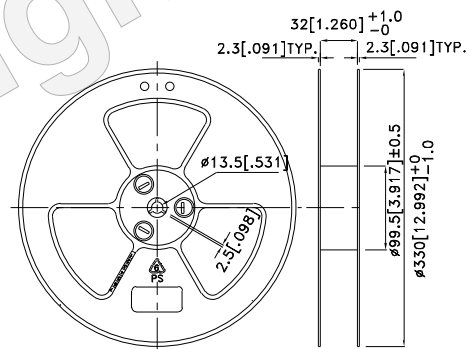
NOTES:

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.

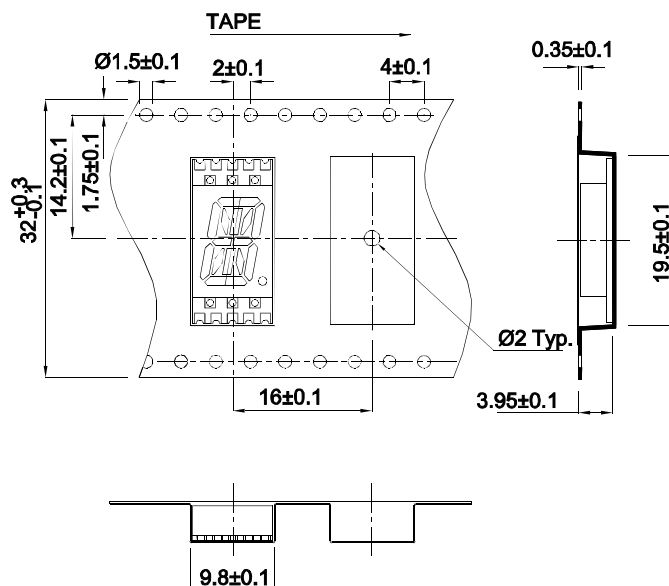
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.15)



Reel Dimension

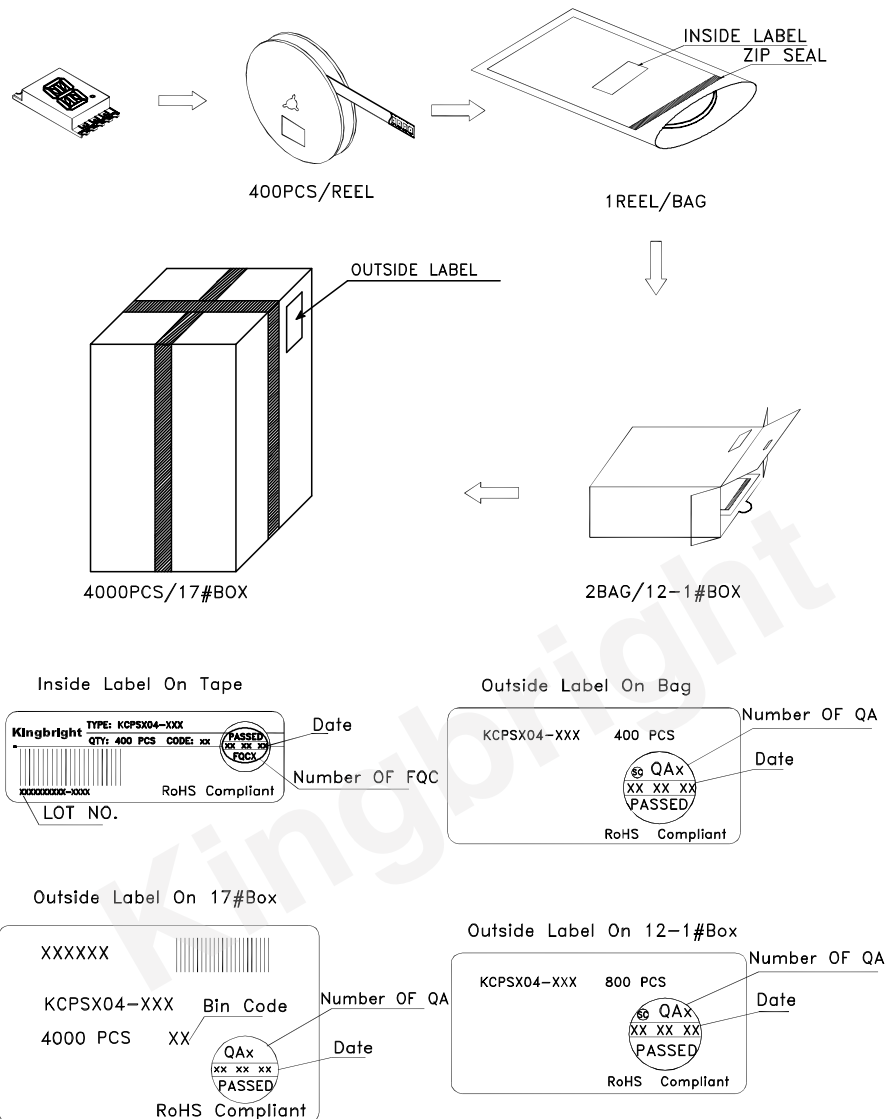


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

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