

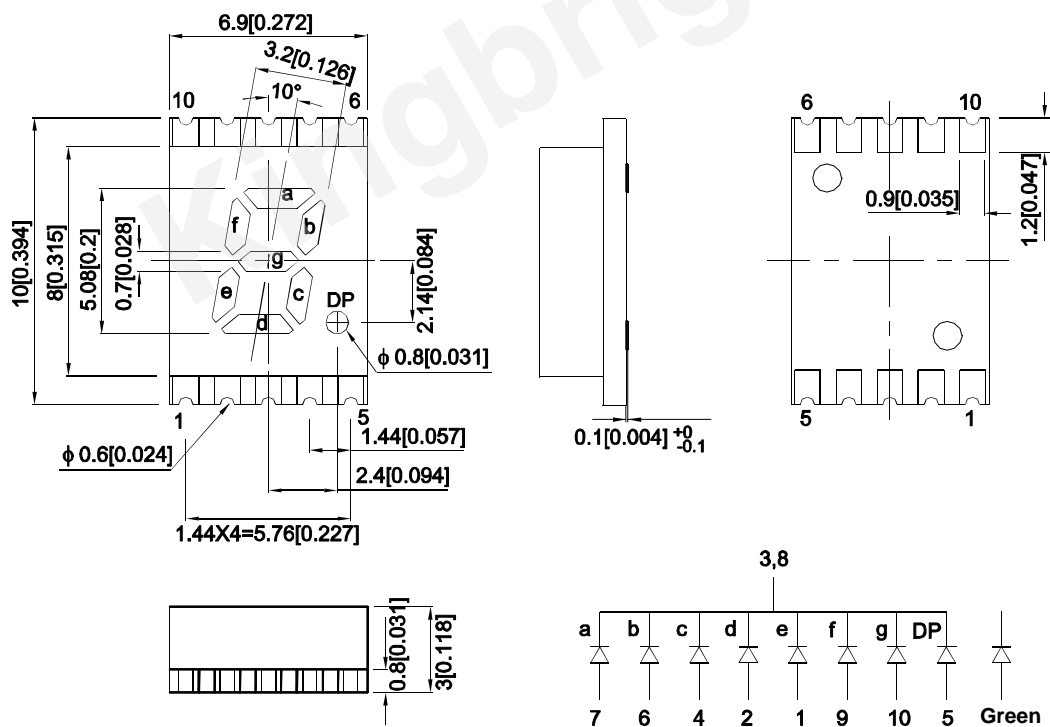
### Features

- 0.2inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package : 650pcs / reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

### Description

The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

### 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.  |                                      |
| KCSC02-123 | Green (AlGaInP)           | White Diffused | 3600                   | 12000 | Common Cathode, Rt.<br>Hand Decimal. |
|            |                           |                | *2200                  | *4300 |                                      |

### Notes:

1. Luminous intensity / luminous Flux: +/-15%.

\* Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

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

| Symbol                | Parameter                | Emitting Color | Typ. | Max. | Units | Test Conditions            |
|-----------------------|--------------------------|----------------|------|------|-------|----------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Green          | 574  |      | nm    | I <sub>F</sub> =10mA       |
| $\lambda_D$ [1]       | Dominant Wavelength      | Green          | 570  |      | nm    | I <sub>F</sub> =10mA       |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Green          | 20   |      | nm    | I <sub>F</sub> =10mA       |
| C                     | Capacitance              | Green          | 15   |      | pF    | V <sub>F</sub> =0V; f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Green          | 2.0  | 2.5  | V     | I <sub>F</sub> =10mA       |
| I <sub>R</sub>        | Reverse Current          | Green          |      | 10   | uA    | V <sub>R</sub> =5V         |

### Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

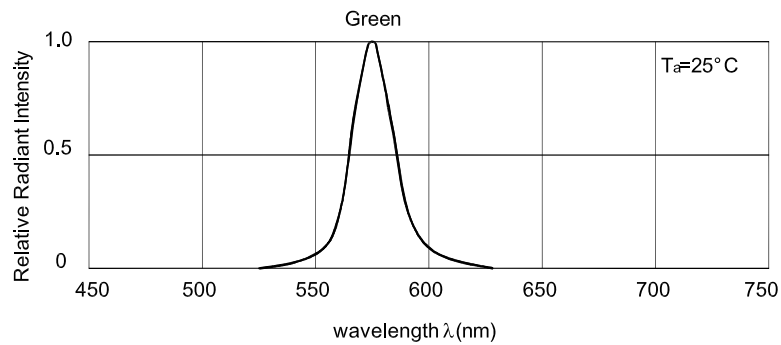
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

| Parameter                       | Values         | Units |
|---------------------------------|----------------|-------|
| Power dissipation               | 75             | mW    |
| DC Forward Current              | 30             | mA    |
| Peak Forward Current [1]        | 150            | mA    |
| Reverse Voltage                 | 5              | V     |
| Operating / Storage Temperature | -40°C To +85°C |       |

### Note:

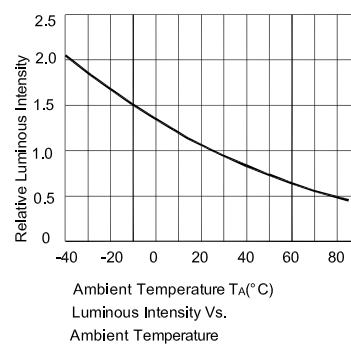
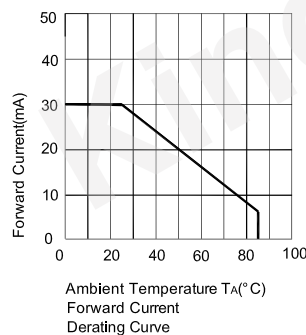
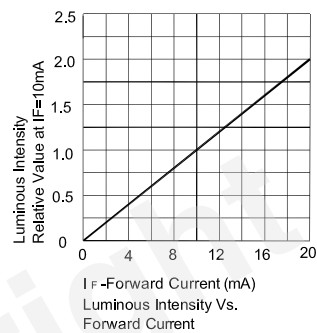
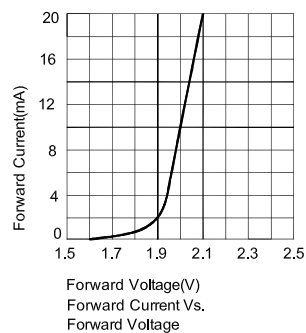
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



Relative Intensity Vs. Wavelength

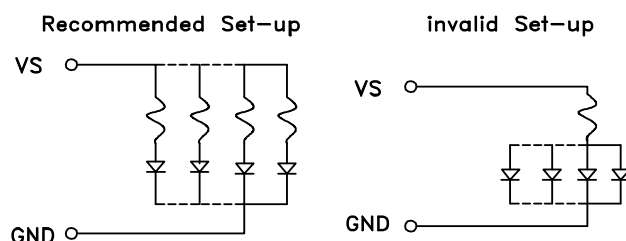
## Green

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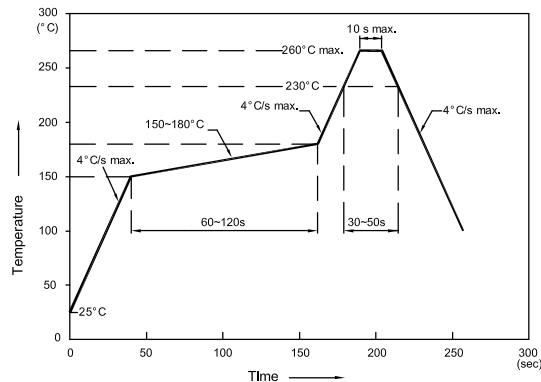
## CIRCUIT DESIGN NOTES

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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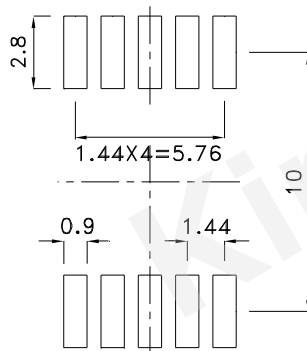
Reflow Soldering Profile For Lead-free SMT Process.



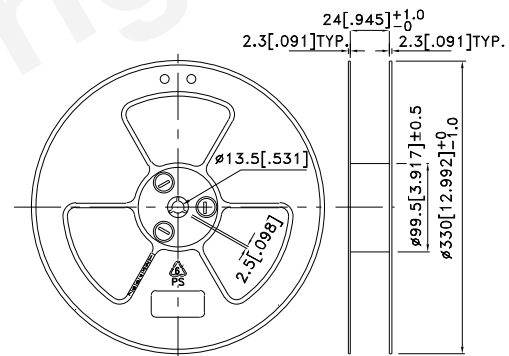
### NOTES:

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.

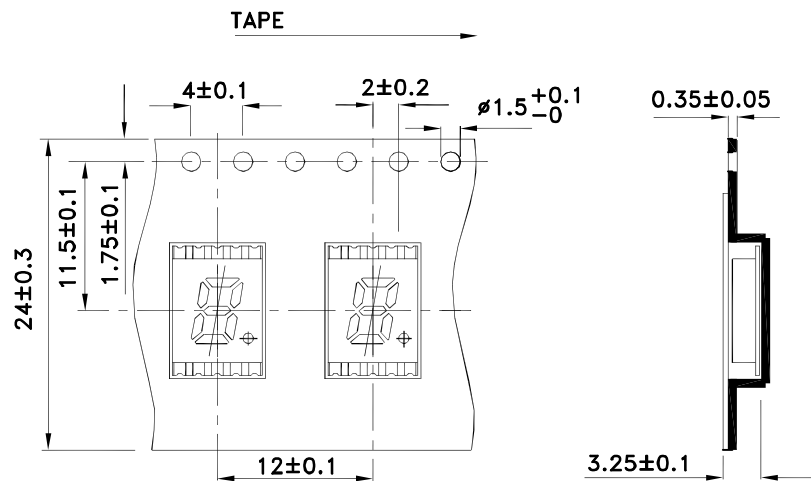
## Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.15$ )



## Reel Dimension

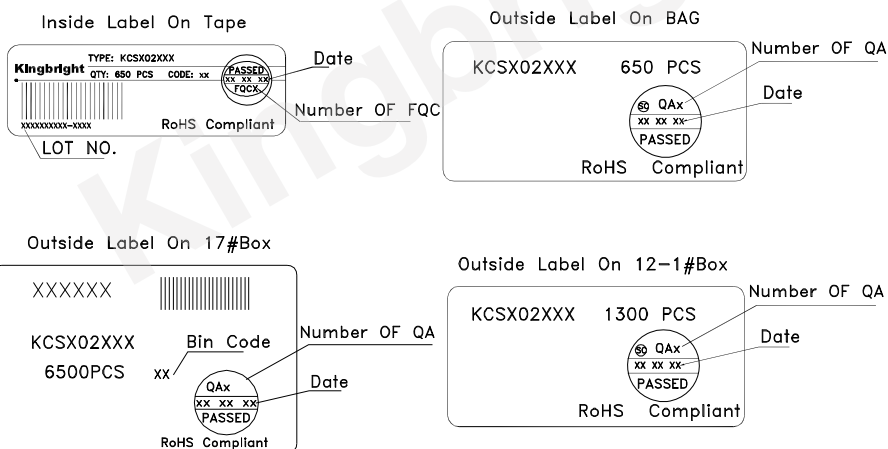
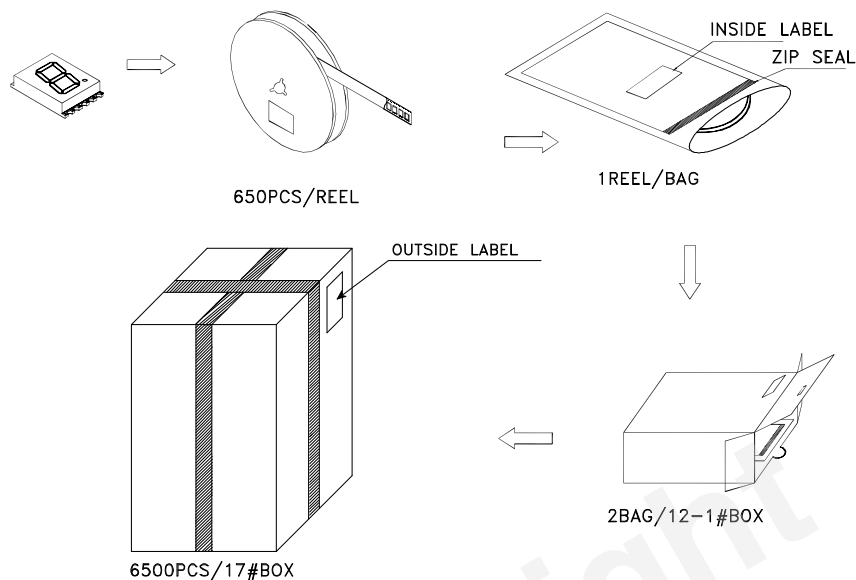


## Tape Specifications (Units : mm)



## PACKING & LABEL SPECIFICATIONS

KCSC02-123



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