



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

Part Number: KCSC56-136

Blue

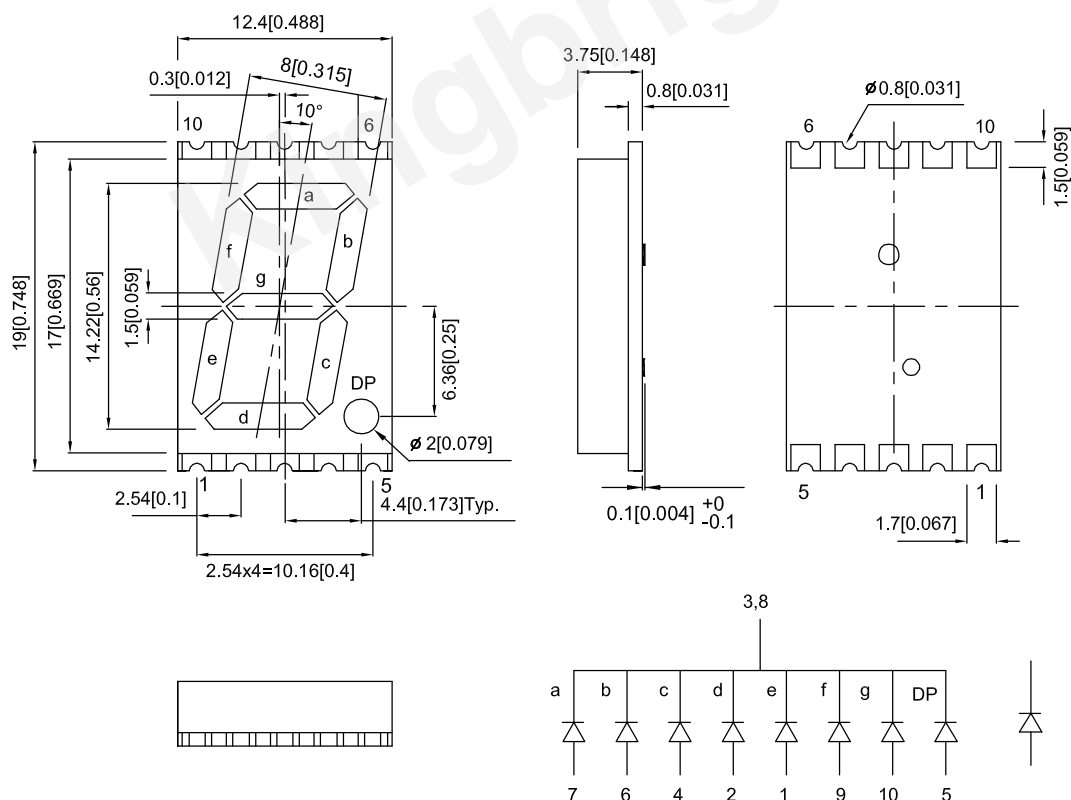
### Features

- 0.56 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package: 400pcs/ reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

### Descriptions

- The Blue source color devices are made with InGaN on SiC Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

### 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. |                                   |
| KCSC56-136 | Blue (InGaN)              | White Diffused | 2200                   | 6600 | Common Cathode, Rt. Hand Decimal. |

### Notes:

1. Luminous intensity/ luminous Flux: +/-15%.
2. 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          | Blue           | 468  |      | nm    | I <sub>F</sub> =10mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Blue           | 465  |      | nm    | I <sub>F</sub> =10mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Blue           | 21   |      | nm    | I <sub>F</sub> =10mA      |
| C                     | Capacitance              | Blue           | 100  |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Blue           | 3.05 | 4.0  | V     | I <sub>F</sub> =10mA      |
| I <sub>R</sub>        | Reverse Current          | Blue           |      | 10   | uA    |                           |

### Notes:

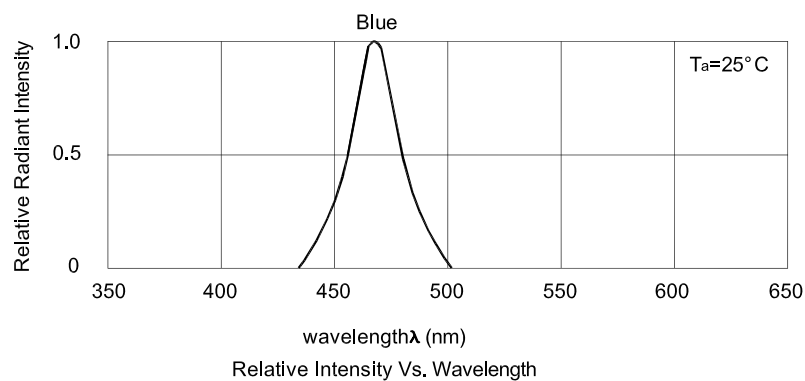
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3.Wavelength value is traceable to CIE127-2007 standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

| Parameter                               | Values         | Units |
|---|----------------|-------|
| Power dissipation                       | 120            | mW    |
| DC Forward Current                      | 30             | mA    |
| Peak Forward Current [1]                | 100            | mA    |
| Electrostatic Discharge Threshold (HBM) | 1000           | V     |
| Reverse Voltage                         | 5              | V     |
| Operating / Storage Temperature         | -40°C To +85°C |       |

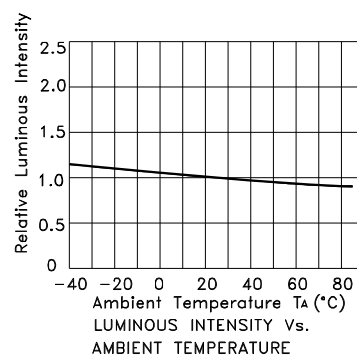
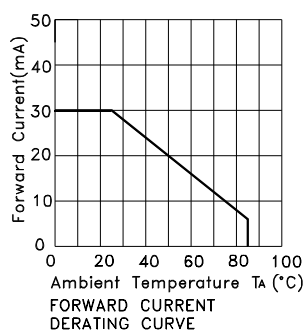
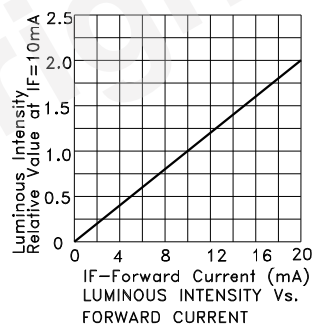
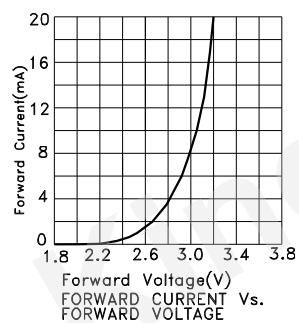
### Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 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.



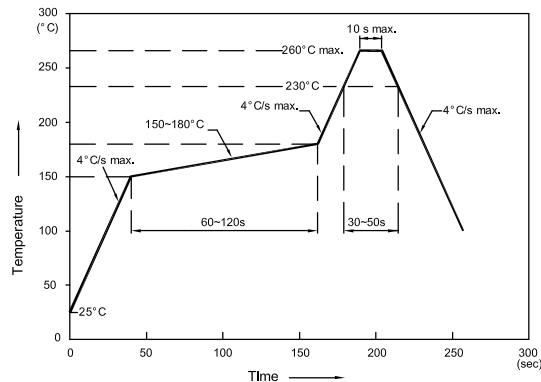
Blue

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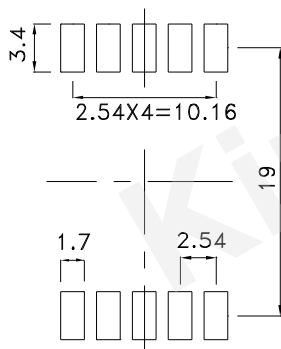
Reflow Soldering Profile For Lead-free SMT Process.



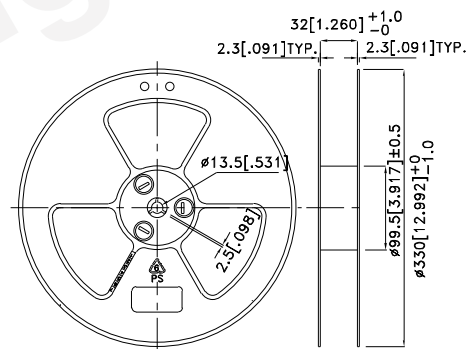
### NOTES:

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.

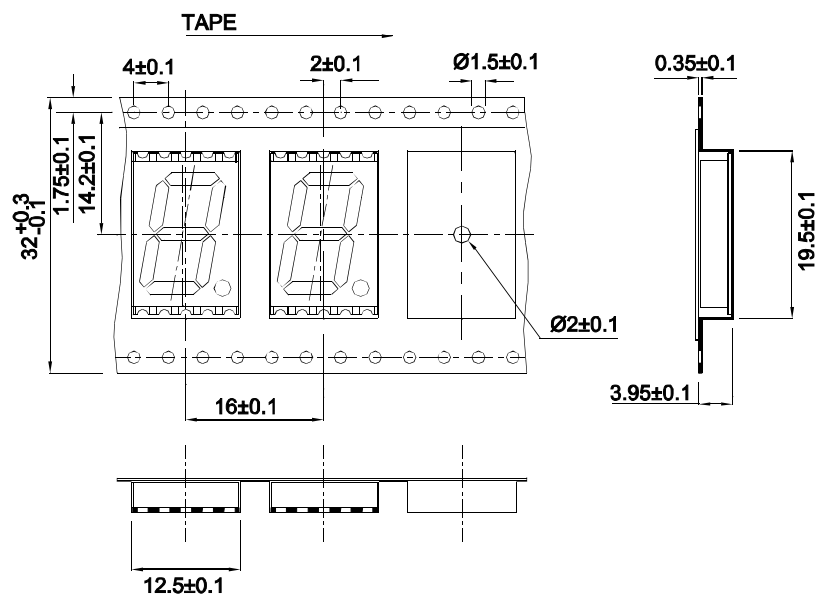
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.15$ )



### Reel Dimension

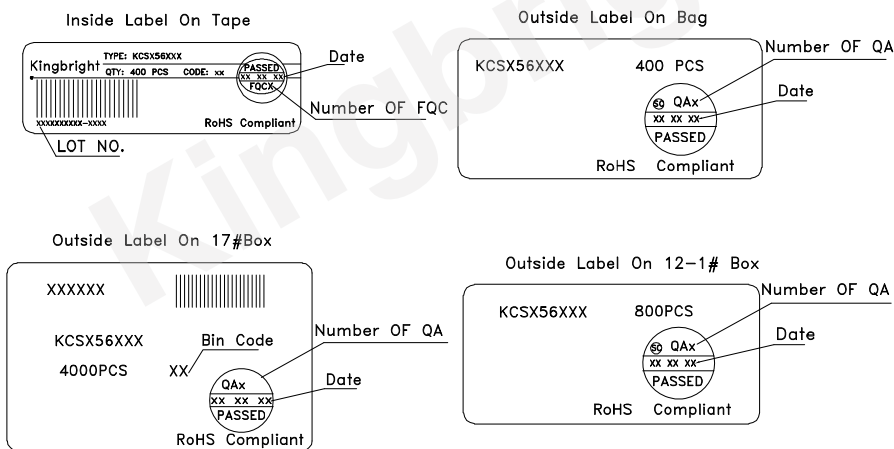
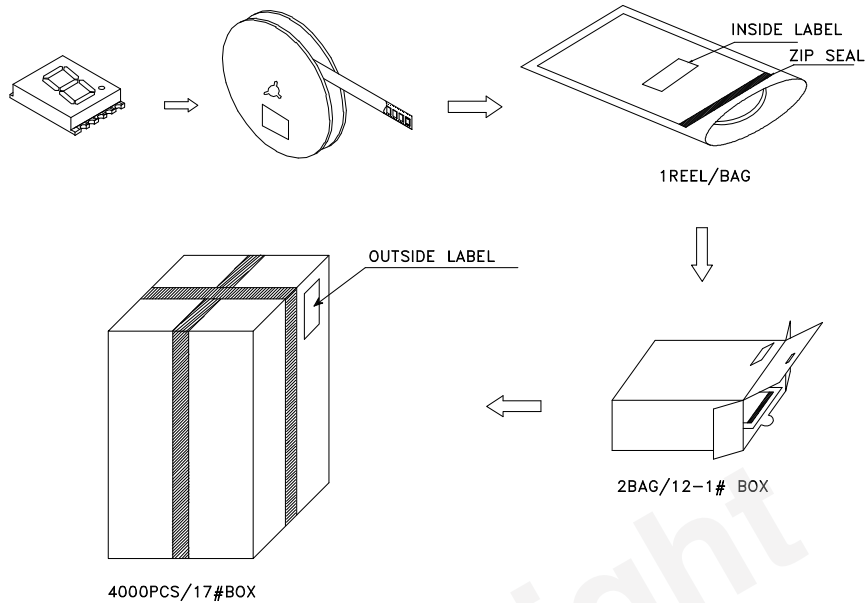


### Tape Specifications (Units : mm)



## PACKING & LABEL SPECIFICATIONS

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