

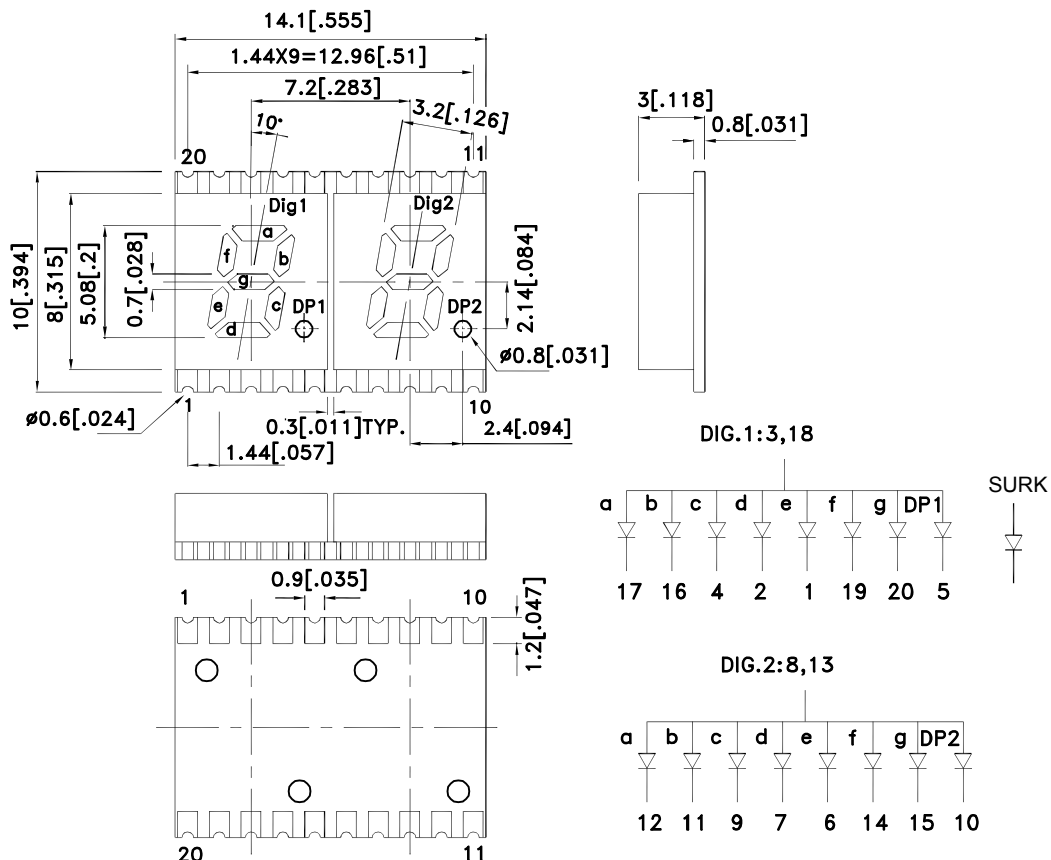
### Features

- 0.2 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 Hyper Red source color devices are made with Al-GaN/P on GaAs substrate Light Emitting Diode.

### Package Dimensions & Internal Circuit Diagram



## Selection Guide

| Part No.   | Dice                | Lens Type      | Iv (ucd) [1]<br>@ 10mA |       | Description                     |
|------------|---------------------|----------------|------------------------|-------|---------------------------------|
|            |                     |                | Min.                   | Typ.  |                                 |
| KCDA02-105 | Hyper Red (AlGaInP) | White Diffused | 14000                  | 30000 | Common Anode, Rt. Hand Decimal. |

Note:

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

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

| Symbol                | Parameter                | Device    | Typ. | Max. | Units | Test Conditions           |
|-----------------------|--------------------------|-----------|------|------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red | 650  |      | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Hyper Red | 630  |      | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red | 28   |      | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Hyper Red | 35   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Hyper Red | 1.95 | 2.5  | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Hyper Red |      | 10   | uA    | V <sub>R</sub> =5V        |

Notes:

1. Wavelength: +/-1nm.

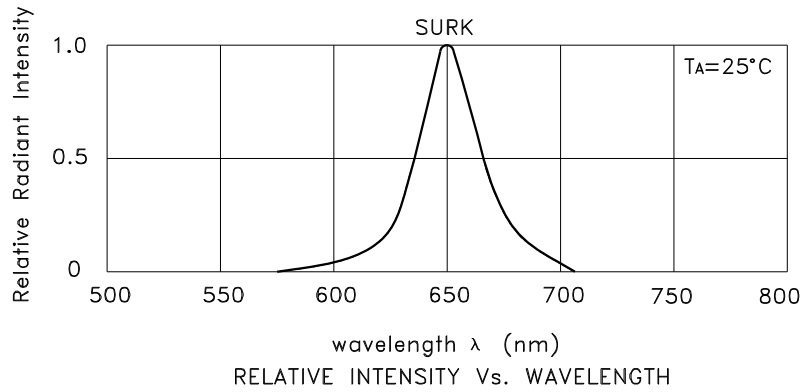
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

| Parameter                       | Hyper Red      | Units |
|---------------------------------|----------------|-------|
| Power dissipation               | 75             | mW    |
| DC Forward Current              | 30             | mA    |
| Peak Forward Current [1]        | 185            | mA    |
| Reverse Voltage                 | 5              | V     |
| Operating / Storage Temperature | -40°C To +85°C |       |

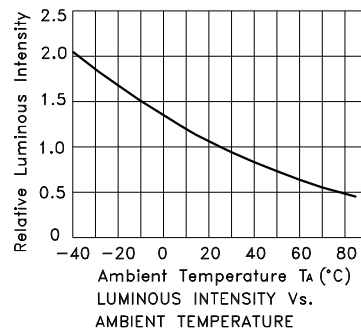
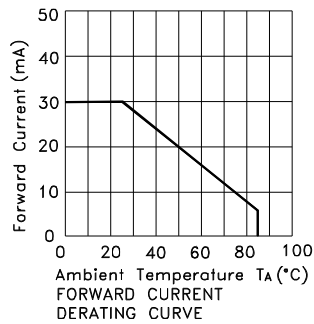
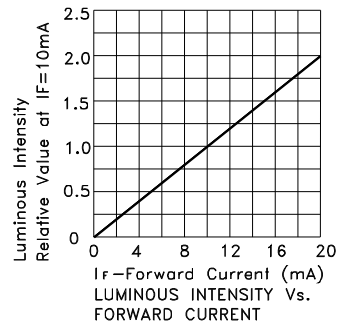
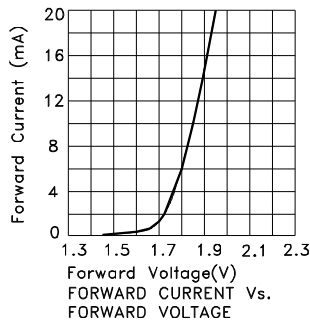
Note:

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



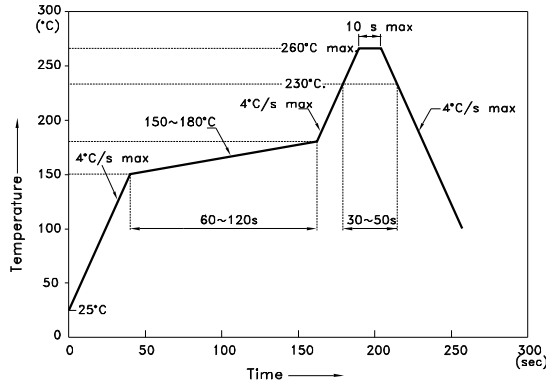
## Hyper Red

### KCDA02-105



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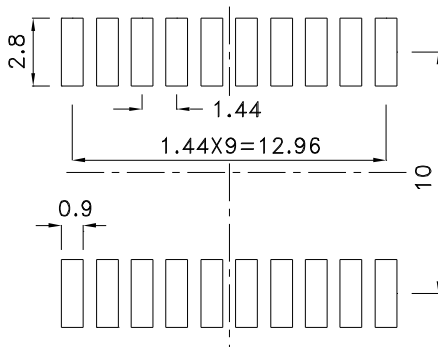
Reflow Soldering Profile For Lead-free SMT Process.



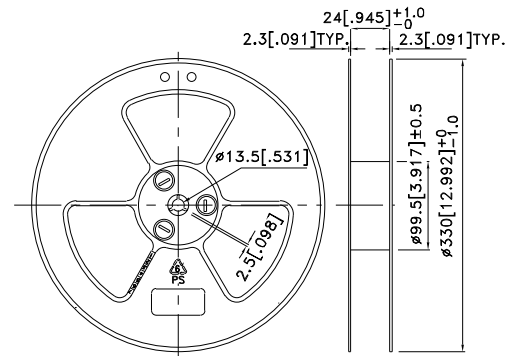
NOTES:

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.

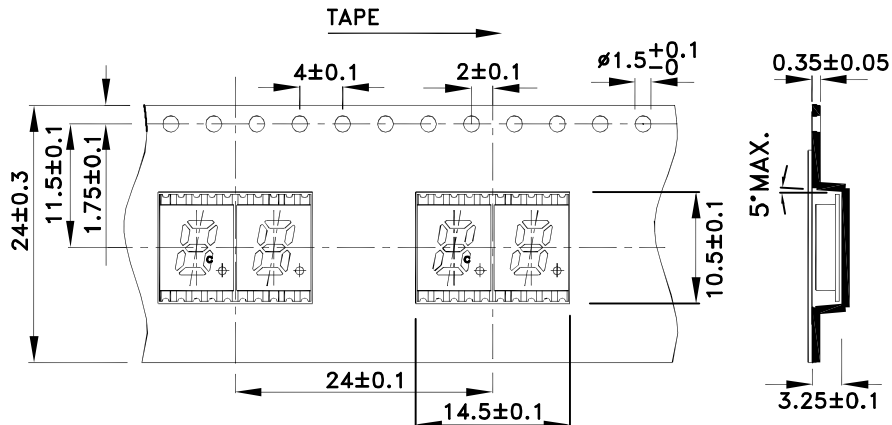
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.15)



### Reel Dimension

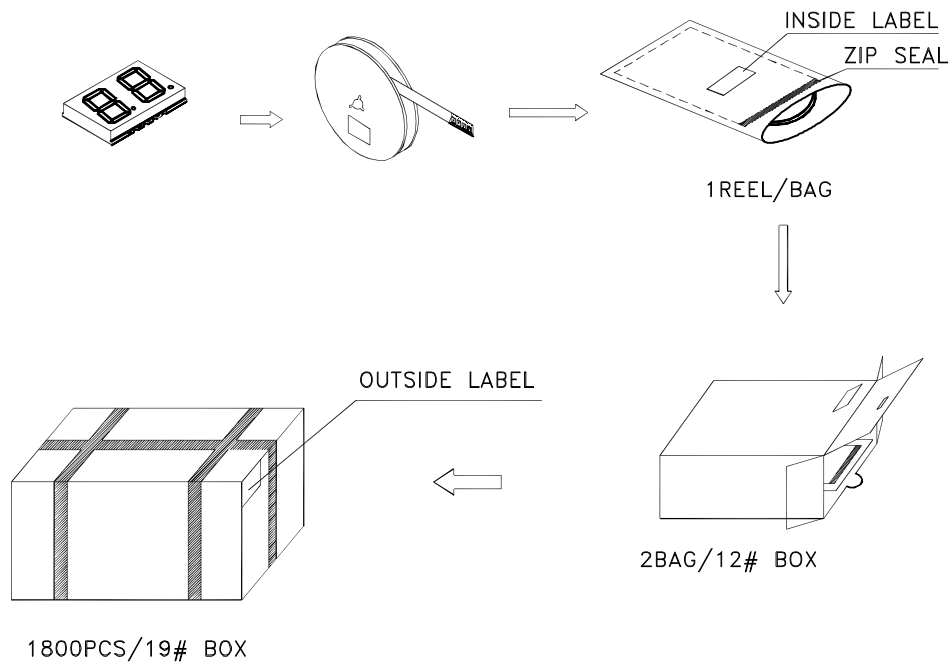


### Tape Specifications (Units : mm)

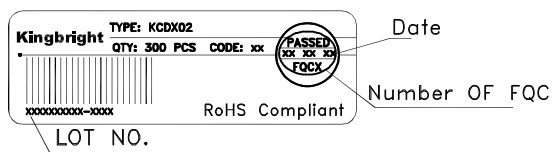


**PACKING & LABEL SPECIFICATIONS**

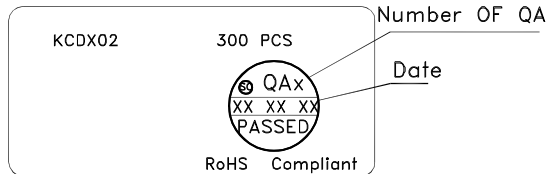
**KCDA02-105**



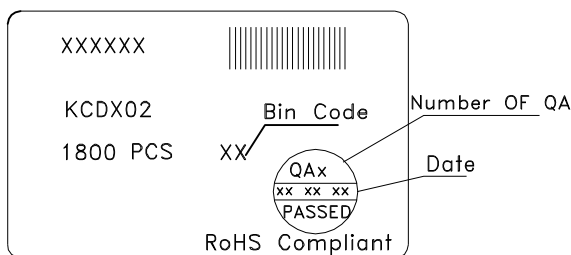
Inside Label On Tape



Outside Label On BAG



Outside Label On 19#Box



Outside Label On 12#Box

