

Part Number: KCSC02-105

Hyper Red

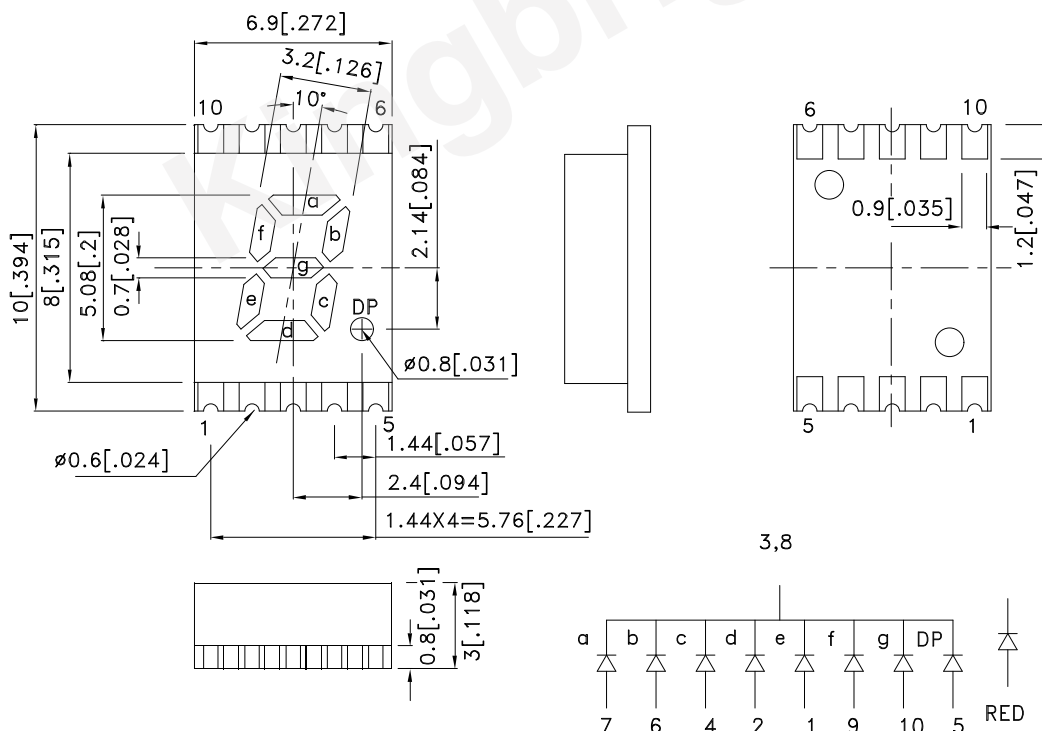
### Features

- 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 Hyper Red source color devices are made with Al-GaN 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.   | Dice                | Lens Type      | Iv (ucd) [1]<br>@ 10mA |       | Description                       |
|------------|---------------------|----------------|------------------------|-------|-----------------------------------|
|            |                     |                | Min.                   | Typ.  |                                   |
| KCSC02-105 | Hyper Red (AlGaInP) | White Diffused | 14000                  | 30000 | Common Cathode, Rt. Hand Decimal. |
|            |                     |                | *3600                  | *8100 |                                   |

Note:

- 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                | Device    | Typ. | Max. | Units | Test Conditions           |
|-----------------------|--------------------------|-----------|------|------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red | 645  |      | 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:

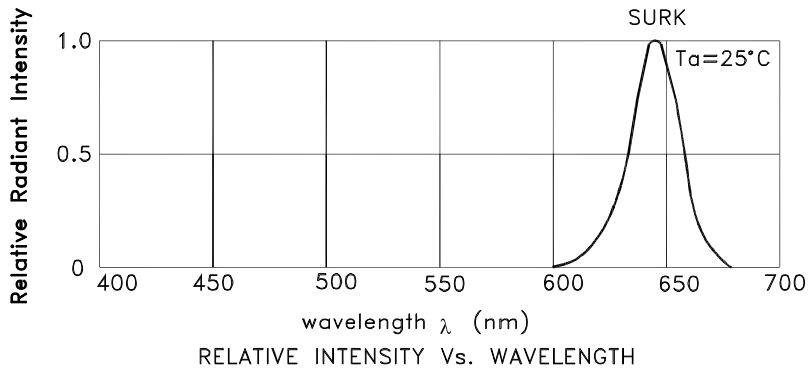
- Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.
- Wavelength value is traceable to the CIE127-2007 compliant national standards.

## 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 |       |

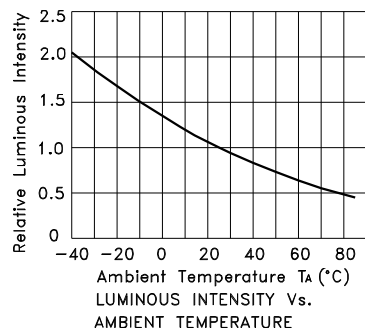
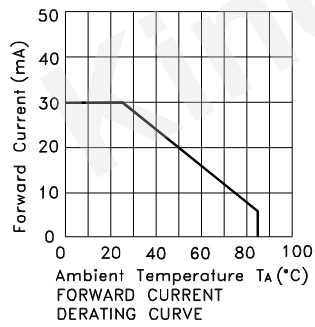
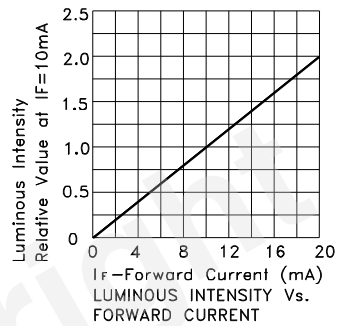
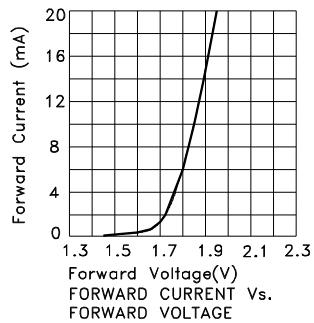
Note:

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



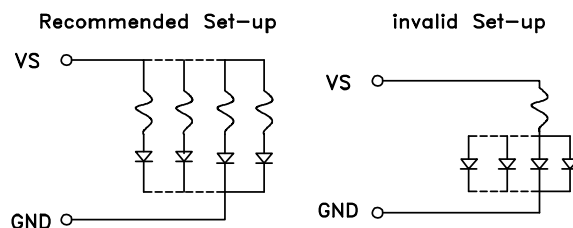
## Hyper Red

### KCSC02-105



## CIRCUIT DESIGN NOTES

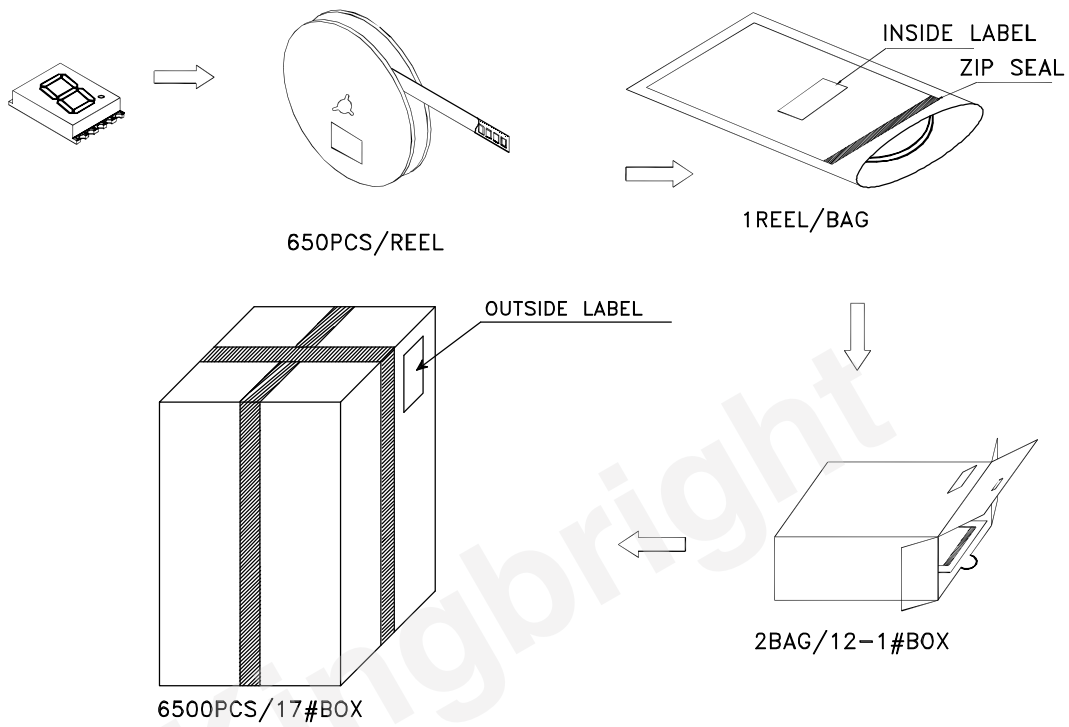
1. Protective current-limiting resistors may be necessary to operate the Displays.
2. LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.



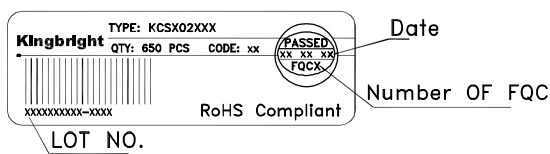


## PACKING & LABEL SPECIFICATIONS

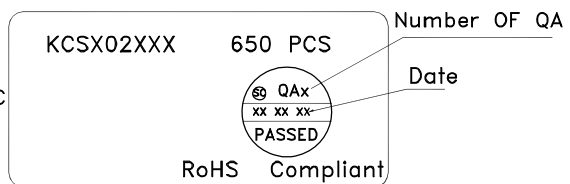
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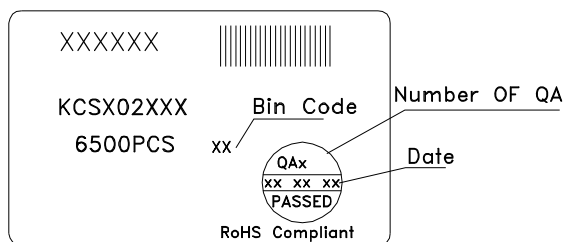
Inside Label On Tape



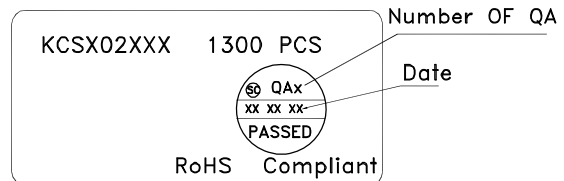
Outside Label On BAG



Outside Label On 17#Box



Outside Label On 12-1#Box



Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)

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