

Part Number: KCDC02-105

HYPER RED

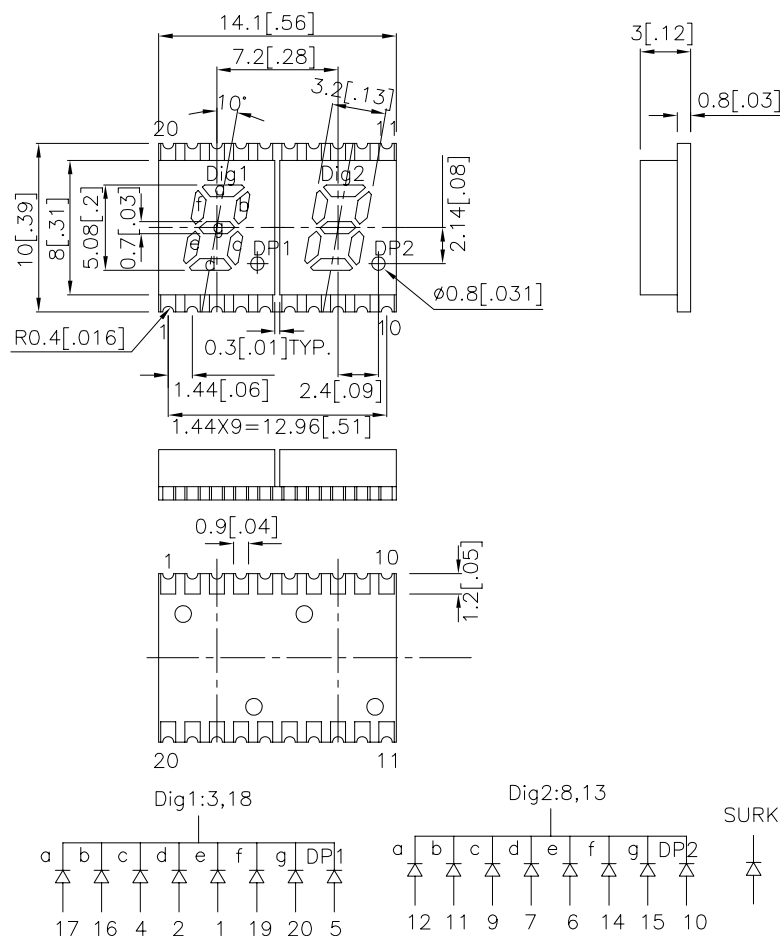
### Features

- 0.2 INCH DIGIT HEIGHT.
- LOW CURRENT OPERATION.
- EXCELLENT CHARACTER APPEARANCE.
- I.C. COMPATIBLE.
- MECHANICALLY RUGGED.
- PACKAGE :300PCS / REEL.
- GRAY FACE, WHITE SEGMENT.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.

### Description

The Hyper Red source color devices are made with DH InGaAlP 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. Specifications are subject to change without 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.  |                                   |
| KCDC02-105 | HYPER RED (InGaAlP) | WHITE DIFFUSED | 8000                   | 30400 | Common Cathode, 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 | 635  |      | 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.

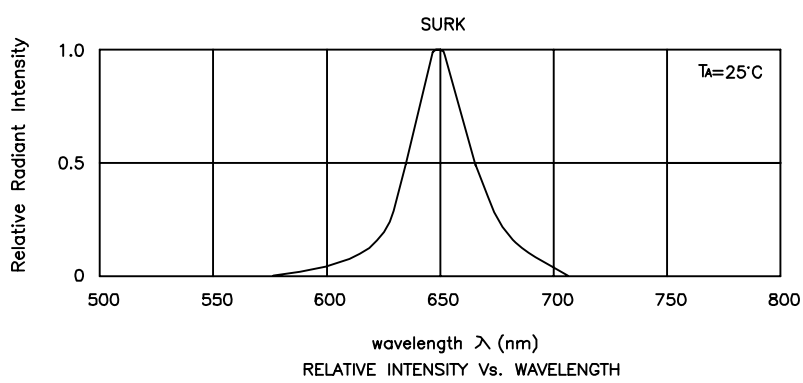
2. Forward Voltage: +/-0.1V.

## 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 |       |

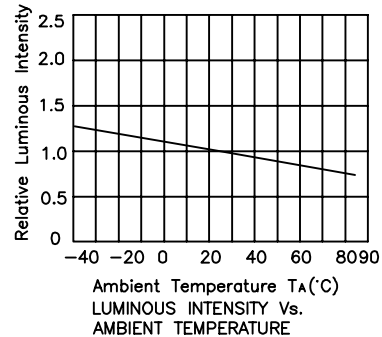
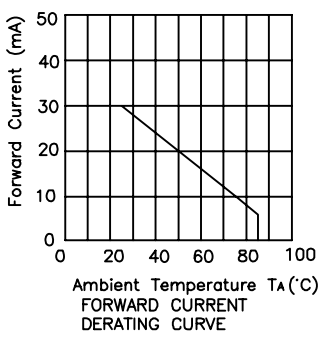
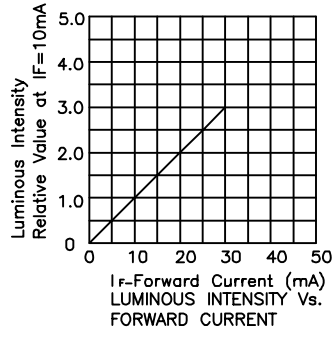
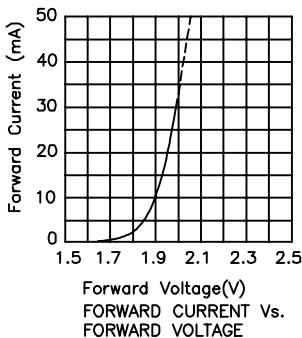
Note:

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



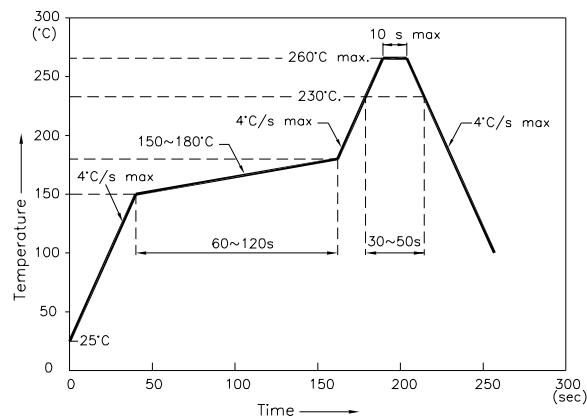
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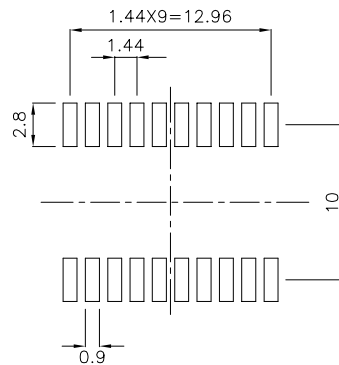
Reflow Soldering Profile For Lead-free SMT Process.



### 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)



## Tape Specifications (Units : mm)

