# Kingbright

## 7.6mmX7.6mm SUPER FLUX LED LAMP

WP7676CSURC

HYPER RED

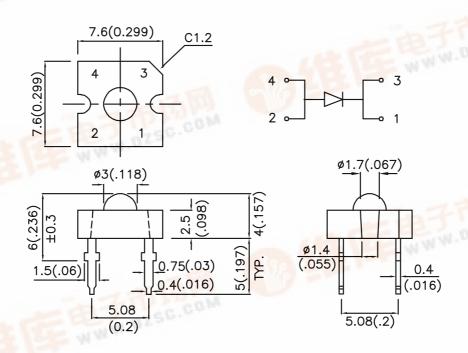
### **Features**

- •SUPER FLUX OUTPUT.
- •DESIGN FOR HIGH CURRENT OPERATION.
- **OUTSTANDING MATERIAL EFFICIENCY.**
- ●RELIABLE AND RUGGED.
- •RoHS COMPLIANT.

## Description

The Hyper Red source color devices are made with DH InGaAIP on GaAs substrate Light Emitting Diode.

## Package Dimensions



### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
- 3. Lead spacing is measured where the leads emerge from the package.

4. Specifications are subject to change without notice.

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## **Selection Guide**

| Part No.    | lo. Dice Lens Type  | Iv (mcd)<br>@ 20mA *70mA |      | Viewing<br>Angle |         |
|-------------|---------------------|--------------------------|------|------------------|---------|
|             |                     |                          | Min. | Тур.             | 2 θ 1/2 |
| WP7676CSURC | HYPER RED (InGaAIP) | WATER CLEAR              | 280  | 500              | 70°     |
|             |                     |                          | *480 | *1000            |         |

#### Notes:

- 1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 2. \* Luminous intensity with asterisk is measured at 70mA under 40ms pulse width.
- 3. Drive current between 10mA and 30mA are recommended for long term performance.
- 4. Operation at current below 10mA is not recommended.

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

| Symbol | Parameter                | Device    | Тур. | Max. | Units | Test Conditions |
|--------|--------------------------|-----------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Hyper Red | 640  |      | nm    | IF=20mA         |
| λD     | Dominant Wavelength      | Hyper Red | 628  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | Hyper Red | 27   |      | nm    | IF=20mA         |
| С      | Capacitance              | Hyper Red | 45   |      | pF    | VF=0V;f=1MHz    |
| VF     | Forward Voltage          | Hyper Red | 1.9  | 2.5  | V     | IF=20mA         |
| lr     | Reverse Current          | Hyper Red |      | 10   | uA    | VR= 5V          |

# Absolute Maximum Ratings at Ta=25°C

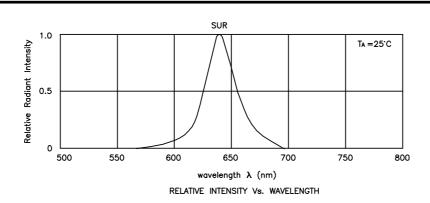
| Parameter                       | Hyper Red           |    |  |  |  |
|---------------------------------|---------------------|----|--|--|--|
| Power dissipation               | 170                 | mW |  |  |  |
| DC Forward Current              | 30                  | mA |  |  |  |
| Peak Forward Current [1]        | 185                 | mA |  |  |  |
| Reverse Voltage                 | 5                   | V  |  |  |  |
| Operating / Storage Temperature | -40°C To +85°C      |    |  |  |  |
| Lead Solder Temperature [2]     | 260°C For 3 Seconds |    |  |  |  |
| Lead Solder Temperature [3]     | 260°C For 5 Seconds |    |  |  |  |

## Notes:

- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2. 2mm below package base.
- 3. 5mm below package base.

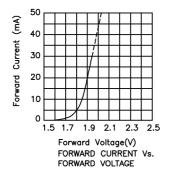
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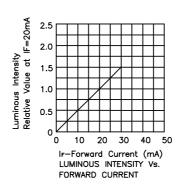
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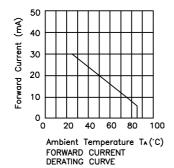


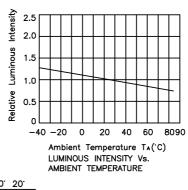
Hyper Red

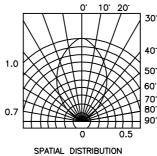
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### Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

- 1. Wavelength: +/-1nm
- 2. Luminous Intensity: +/-15%
- 3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

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