

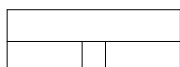
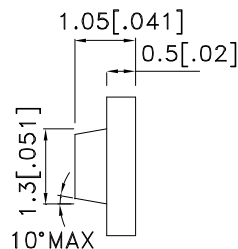
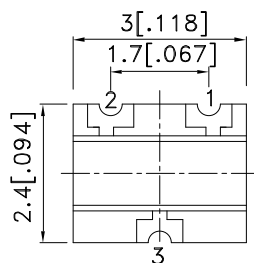
### Features

- 3mmx2.4mm SMT LED, 1.05mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

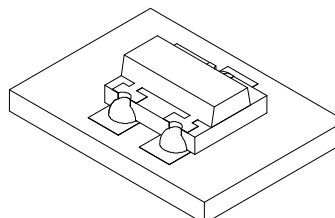
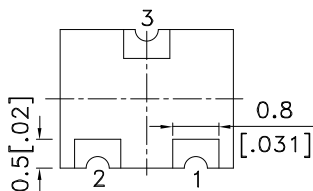
### Description

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

### Package Dimensions



1. ANODE
2. N.C
3. CATHODE



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2$  (0.008") unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

| Part No.     | Dice                | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|--------------|---------------------|-------------|------------------------|------|----------------------|
|              |                     |             | Min.                   | Typ. | 2θ1/2                |
| KP-23SURCK-F | Hyper Red (InGaAlP) | WATER CLEAR | 50                     | 150  | 120°                 |

### Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

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

| Symbol | Parameter                | Device    | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|-----------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Hyper Red | 650  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | Hyper Red | 635  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | Hyper Red | 28   |      | nm    | IF=20mA         |
| C      | Capacitance              | Hyper Red | 35   |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Hyper Red | 1.95 | 2.5  | V     | IF=20mA         |
| IR     | Reverse Current          | Hyper Red |      | 10   | uA    | VR=5V           |

### Notes:

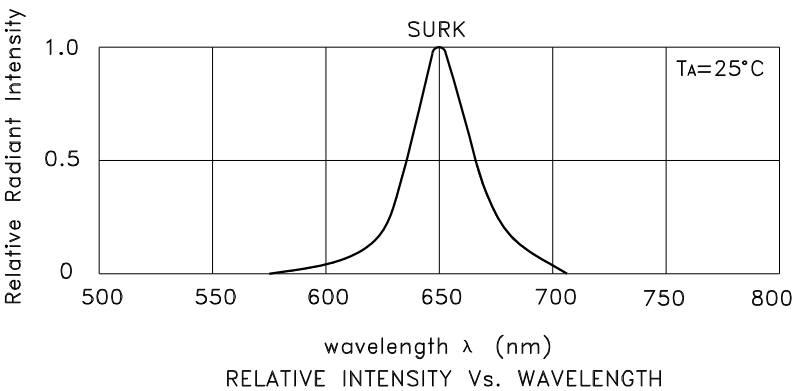
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

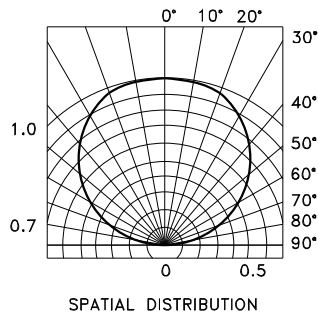
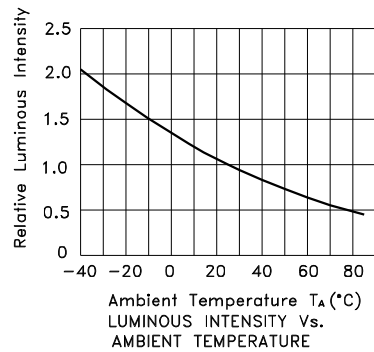
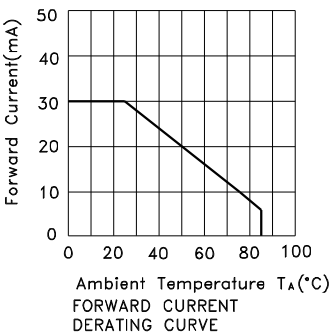
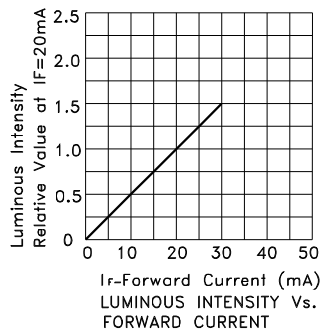
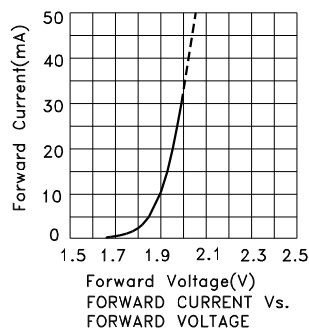
| Parameter                | Hyper Red      | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 75             | mW    |
| DC Forward Current       | 30             | mA    |
| Peak Forward Current [1] | 185            | mA    |
| Reverse Voltage          | 5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

### Note:

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



Hyper Red KP-23SURCK-F



## KP-23SURCK-F

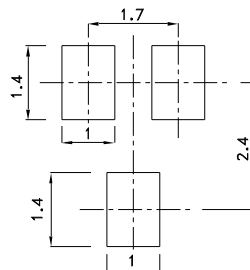
Reflow Soldering Profile For Lead-free SMT Process.



### 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: $\pm 0.1$ )



## Tape Specifications (Units : mm)

