

WP813SRC/E

SUPER BRIGHT RED

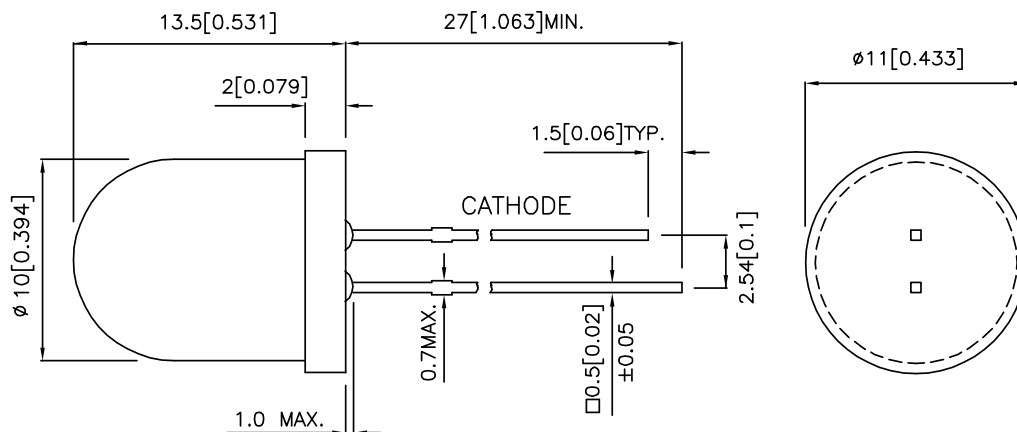
### Features

- 10mm DIAMETER BIG LAMP.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

### Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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.

## Selection Guide

| Part No.   | Dice                       | Lens Type   | Iv (mcd)<br>@ 20mA |      | Viewing<br>Angle |
|------------|----------------------------|-------------|--------------------|------|------------------|
|            |                            |             | Min.               | Typ. | 2 θ 1/2          |
| WP813SRC/E | SURPER BRIGHT RED (GaAlAs) | WATER CLEAR | 1800               | 2700 | 40°              |

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

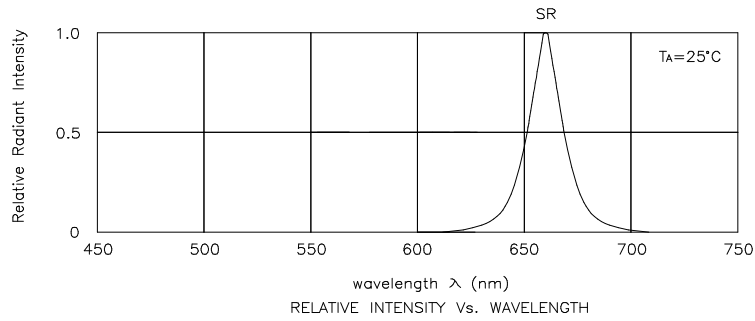
| Symbol                | Parameter                | Device           | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|------------------|------|------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Red | 660  |      | nm    | IF=20mA         |
| $\lambda_D$           | Dominant Wavelength      | Super Bright Red | 640  |      | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Red | 20   |      | nm    | IF=20mA         |
| C                     | Capacitance              | Super Bright Red | 95   |      | pF    | VF=0V;f=1MHz    |
| VF                    | Forward Voltage          | Super Bright Red | 1.85 | 2.5  | V     | IF=20mA         |
| IR                    | Reverse Current          | Super Bright Red |      | 10   | uA    | VR = 5V         |

## Absolute Maximum Ratings at TA=25°C

| Parameter                     | Super Bright Red    | Units |
|-------------------------------|---------------------|-------|
| Power dissipation             | 100                 | mW    |
| DC Forward Current            | 30                  | mA    |
| Peak Forward Current [1]      | 150                 | 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 |       |

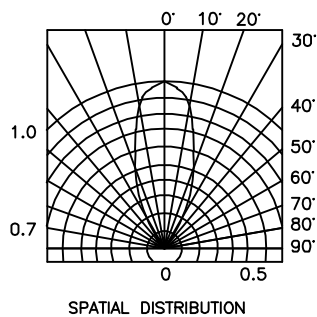
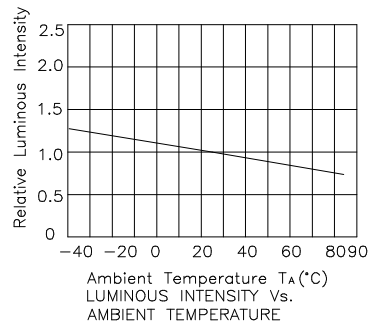
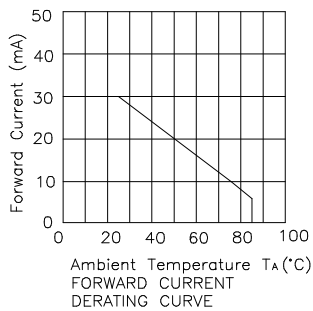
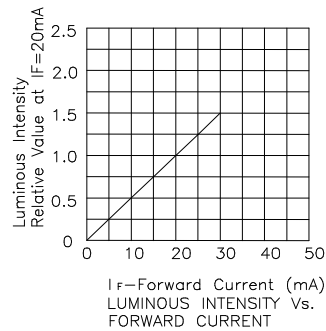
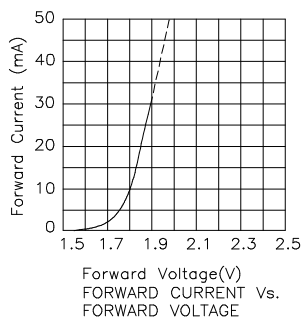
Notes:

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



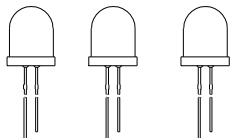
## Super Bright Red

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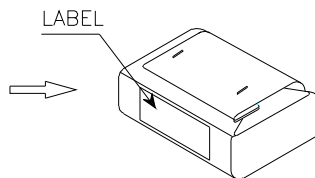


## PACKING & LABEL SPECIFICATIONS

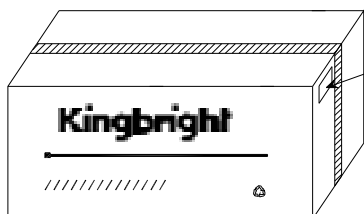
## WP813SRC/E



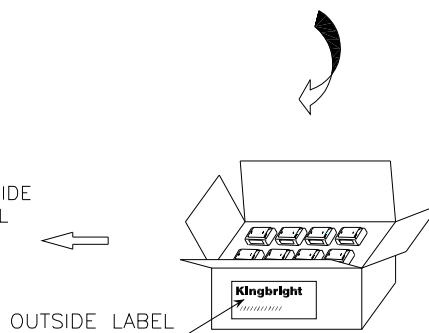
P/N: WP813SRC/E




200PCS / BAG



8K / 9# BOX



1K / 1# BOX

|                   |  |    |          |        |
|-------------------|--|----|----------|--------|
| <b>Kingbright</b> |  |    |          |        |
| Q.C.              | <table border="1"> <tr> <td style="text-align: center;">QC</td> </tr> <tr> <td style="text-align: center;">xx-xx-xx</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table> | QC | xx-xx-xx | PASSED |
| QC                |  |    |          |        |
| xx-xx-xx          |  |    |          |        |
| PASSED            |  |    |          |        |
| TYPE NO :         | WP813SRC/E   |    |          |        |
| QUANTITY :        | 200 pcs  |    |          |        |
| S/N :             | XXX  |    |          |        |
| CODE:             | XX   |    |          |        |
| LOT NO            | <br>xxxxxxxxxxxx  |    |          |        |
| RoHS Compliant    |  |    |          |        |

**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.