

# Kingbright

## T-1 3/4 (5mm) BI-COLOR INDICATOR LAMP

### PRELIMINARY SPEC

WP59SURKSGC

HYPER RED  
SUPER BRIGHT GREEN

### Features

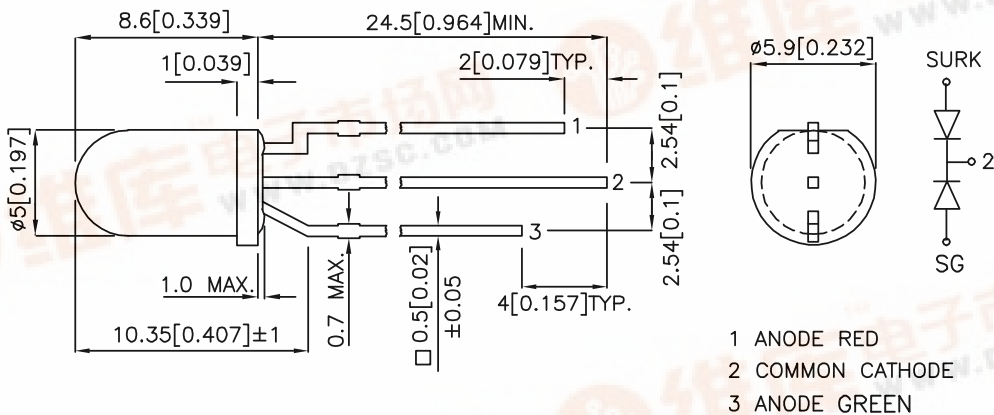
- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- 3 LEADS WITH ONE COMMON LEAD.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

### Description

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

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### Package Dimensions



Notes:  
1. All dimensions are in millimeters (inches).  
2. Tolerance is ±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 $\theta$ 1/2   |
| WP59SURKSGC | HYPER RED (InGaAlP)      | WATER CLEAR | 480                | 1100 | 24°              |
|             | SUPER BRIGHT GREEN (GaP) |             | 70                 | 200  |                  |

Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

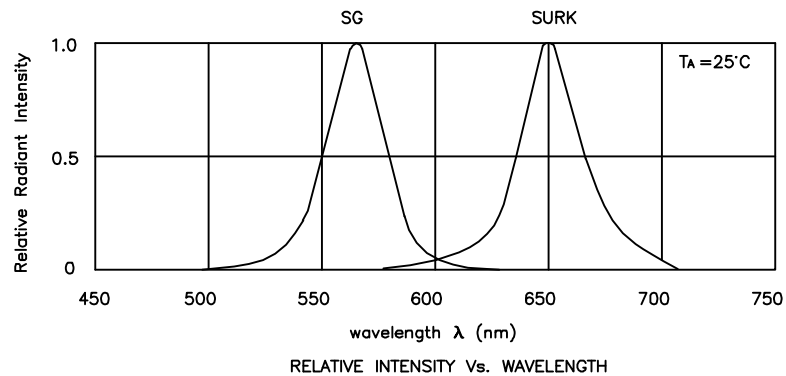
| Symbol                | Parameter                | Device                          | Typ.        | Max.       | Units | Test Conditions |
|-----------------------|--------------------------|---------------------------------|-------------|------------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red<br>Super Bright Green | 650<br>565  |            | nm    | IF=20mA         |
| $\lambda_D$           | Dominant Wavelength      | Hyper Red<br>Super Bright Green | 635<br>568  |            | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red<br>Super Bright Green | 28<br>30    |            | nm    | IF=20mA         |
| C                     | Capacitance              | Hyper Red<br>Super Bright Green | 35<br>15    |            | pF    | VF=0V;f=1MHz    |
| VF                    | Forward Voltage          | Hyper Red<br>Super Bright Green | 1.95<br>2.2 | 2.5<br>2.5 | V     | IF=20mA         |
| IR                    | Reverse Current          | All                             |             | 10         | uA    | VR = 5V         |

## Absolute Maximum Ratings at TA=25°C

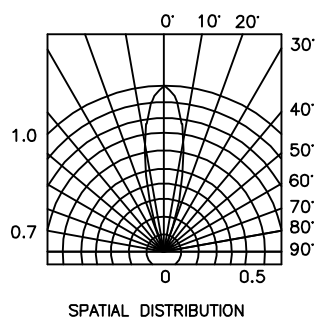
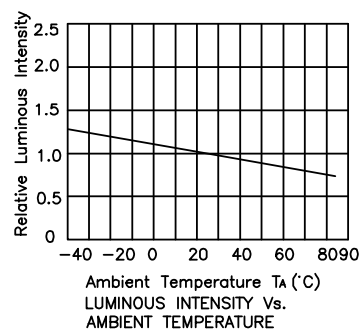
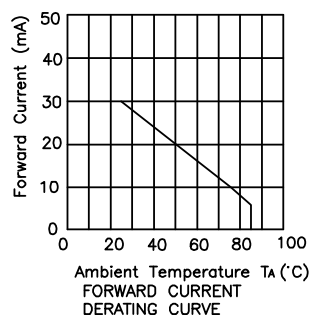
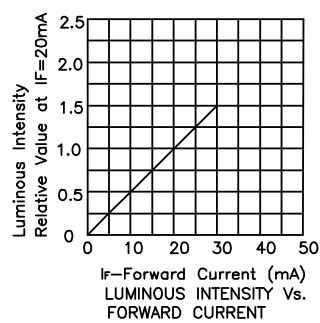
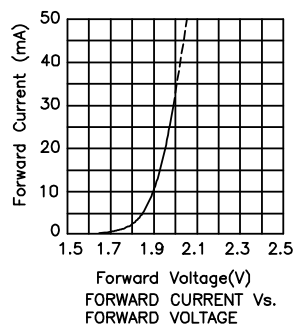
| Parameter                     | Hyper Red           | Super Bright Green | Units |
|-------------------------------|---------------------|--------------------|-------|
| Power dissipation             | 170                 | 105                | mW    |
| DC Forward Current            | 30                  | 25                 | mA    |
| Peak Forward Current [1]      | 185                 | 140                | mA    |
| Reverse Voltage               | 5                   | 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:

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

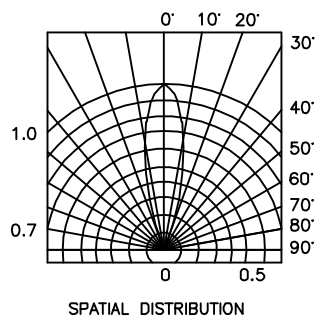
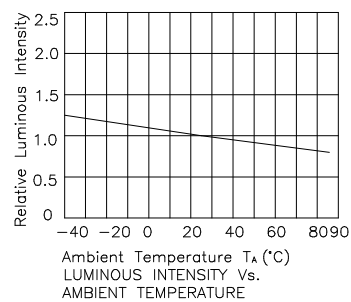
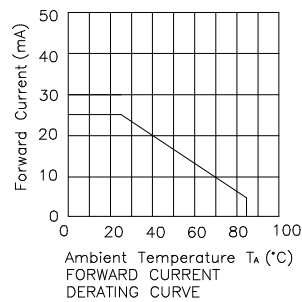
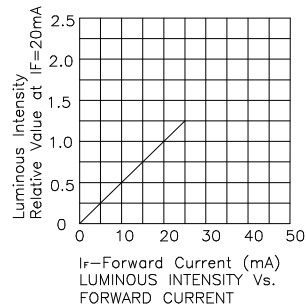
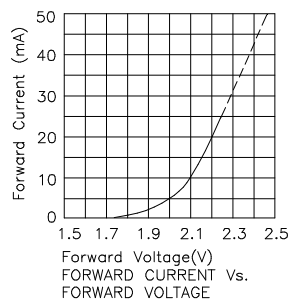


## WP59SURKSGC Hyper Red



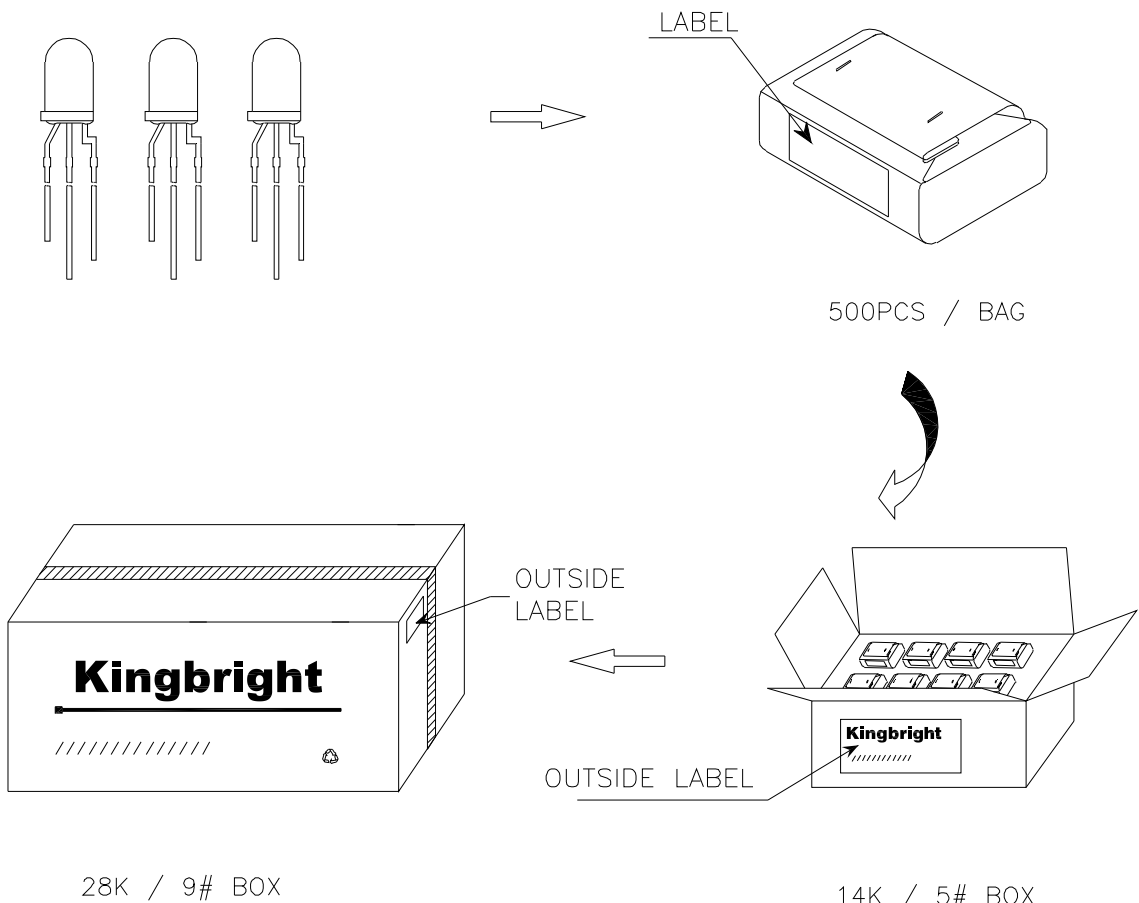
# Kingbright

## Super Bright Green



## PACKING & LABEL SPECIFICATIONS

WP59SURKSGC



|                                                                                             |          |
|---------------------------------------------------------------------------------------------|----------|
| <b>Kingbright</b>                                                                           |          |
| Q.C.                                                                                        |          |
| TYPE NO : WP59XXX                                                                           |          |
| QUANTITY : 500 pcs                                                                          |          |
| S/N : XXX                                                                                   | CODE: XX |
| LOT NO:  |          |
| 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.