



## Selection Guide

| Part No.      | Emitting Color (Material) | Lens Type       | Iv (mcd) [2]<br>@ 10mA |      | Viewing Angle [1] |
|---------------|---------------------------|-----------------|------------------------|------|-------------------|
|               |                           |                 | Min.                   | Typ. | 2θ1/2             |
| WP934SB/GYGYD | Green (GaP)               | Green Diffused  | 10                     | 25   | 40°               |
|               | Yellow (GaAsP/GaP)        | Yellow Diffused | 8                      | 15   | 40°               |

**Notes:**

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity / luminous Flux: +/-15%.
3. Luminous intensity value is traceable to CIE127-2007 standards.

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

| Symbol | Parameter                | Emitting Color  | Typ.       | Max.       | Units | Test Conditions |
|--------|--------------------------|-----------------|------------|------------|-------|-----------------|
| λpeak  | Peak Wavelength          | Green<br>Yellow | 565<br>590 |            | nm    | IF=10mA         |
| λD [1] | Dominant Wavelength      | Green<br>Yellow | 568<br>588 |            | nm    | IF=10mA         |
| Δλ1/2  | Spectral Line Half-width | Green<br>Yellow | 30<br>35   |            | nm    | IF=10mA         |
| C      | Capacitance              | Green<br>Yellow | 15<br>20   |            | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Green<br>Yellow | 2<br>1.95  | 2.5<br>2.5 | V     | IF=10mA         |
| IR     | Reverse Current          | Green<br>Yellow |            | 10<br>10   | μA    | VR = 5V         |

**Notes:**

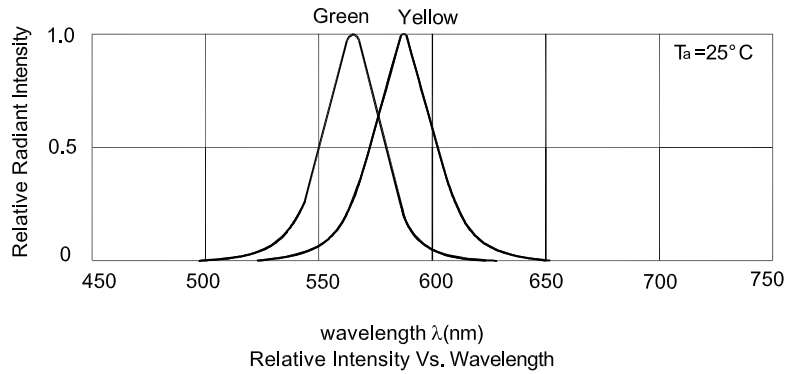
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

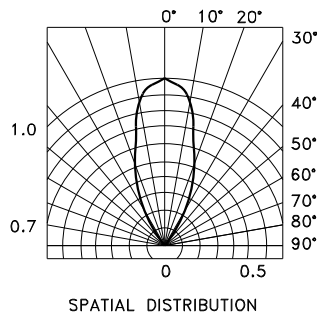
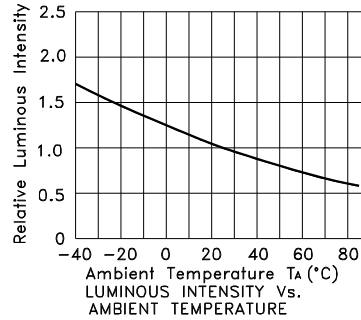
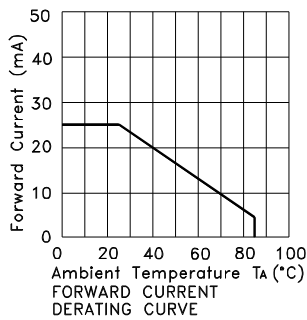
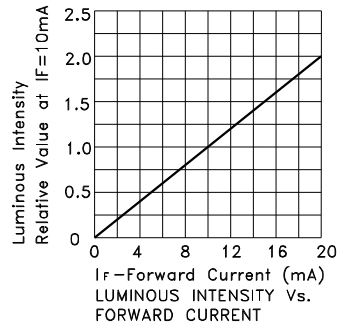
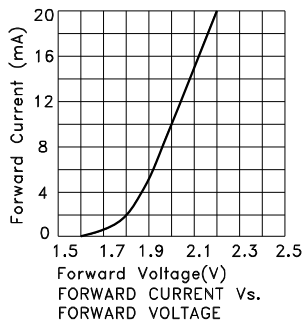
| Parameter                       | Green               | Yellow | Units |
|---------------------------------|---------------------|--------|-------|
| Power dissipation               | 62.5                | 75     | mW    |
| DC Forward Current              | 25                  | 30     | mA    |
| Peak Forward Current [1]        | 140                 | 140    | 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:**

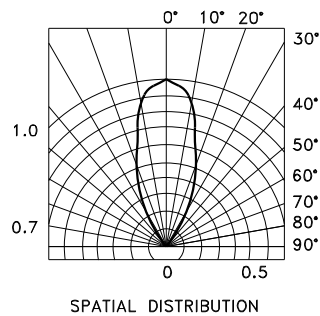
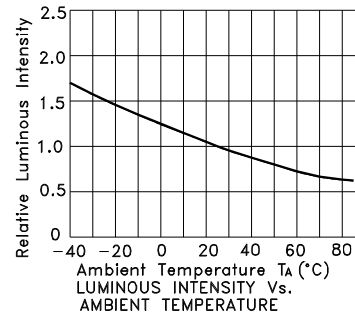
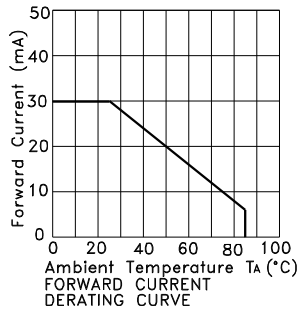
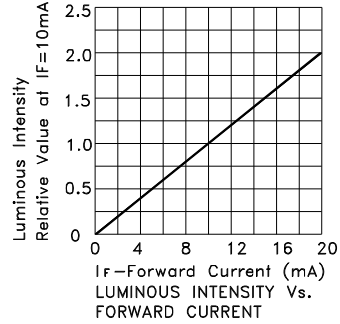
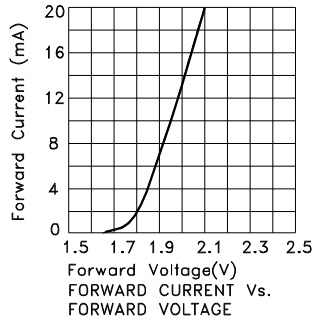
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.
4. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



## WP934SB/GYGYD Green

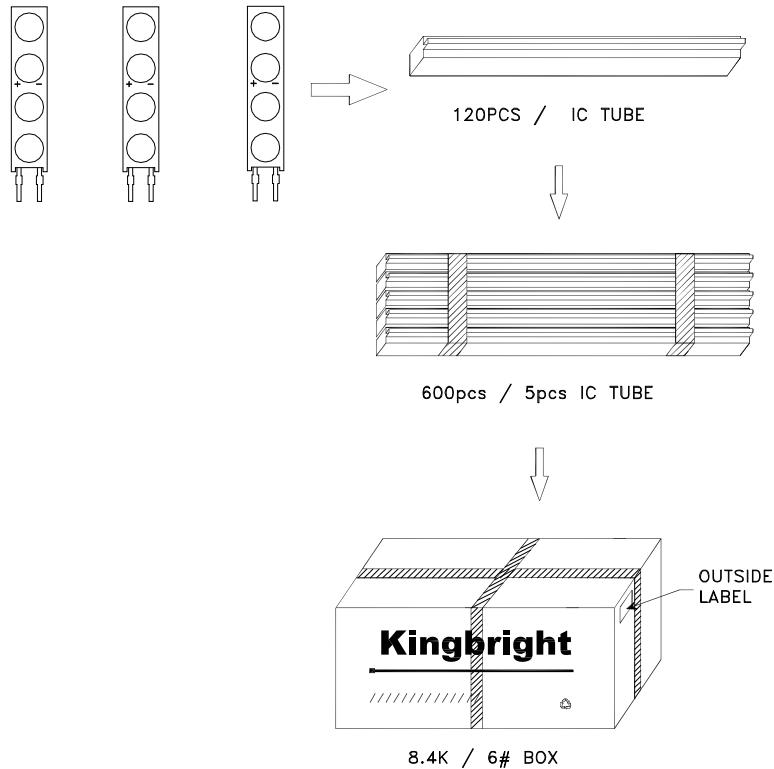



## Yellow



## PACKING & LABEL SPECIFICATIONS

## WP934SB/GYGYD



|  |  |
|--|--|
| <b>Kingbright</b>  |  |
| P/NO: WP934SBxxx   |  |
| QTY: 120 pcs   | Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C<br/>XX XX XXXX<br/>PASSED</span> |
| S/N: XXXX  |  |
| CODE: XXX  |  |
| LOT NO:  |  |
| <br>xxxxxxxxxxxxxxxxxxxxxxxxx |  |
| RoHS Compliant   |  |

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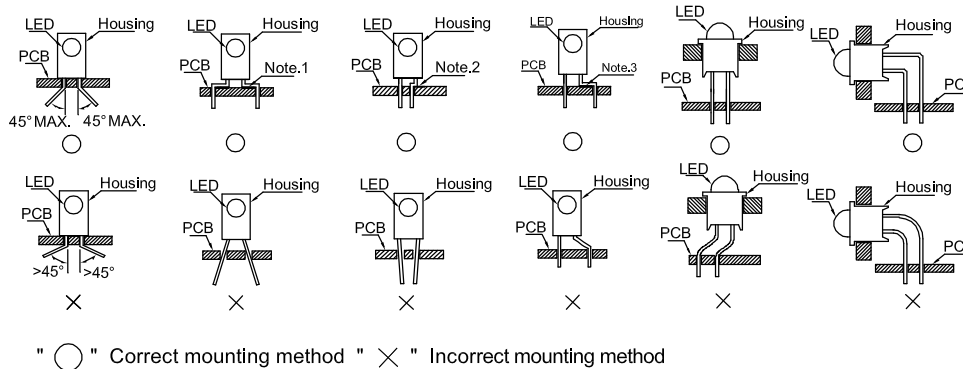
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## PRECAUTIONS

### 1. Storage conditions:

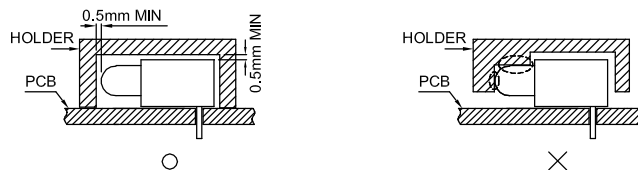
- a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
- b. LEDs should be stored with temperature  $\leq 30^{\circ}\text{C}$  and relative humidity  $< 60\%$ .
- c. Product in the original sealed package is recommended to be assembled within 72 hours of opening. Product in opened package for more than a week should be baked for 30 (+10/-0) hours at  $85 \sim 100^{\circ}\text{C}$ .

### 2. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.



Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

### 3. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.

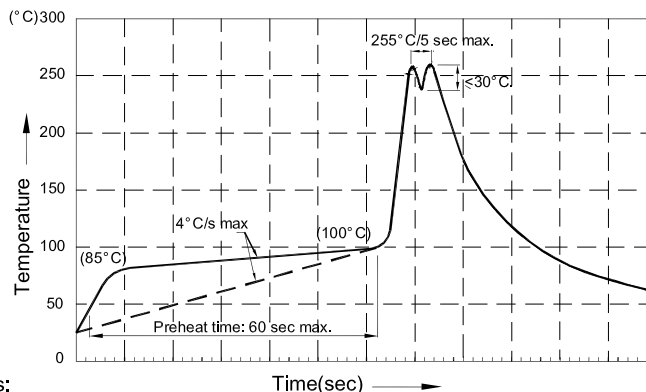


### 4. The tip of the soldering iron should never touch the lens epoxy.

### 5. Through-hole LEDs are incompatible with reflow soldering.

### 6. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.

### 7. Recommended Wave Soldering Profiles:



#### Notes:

1. Recommend pre-heat temperature of  $105^{\circ}\text{C}$  or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of  $260^{\circ}\text{C}$
2. Peak wave soldering temperature between  $245^{\circ}\text{C} \sim 255^{\circ}\text{C}$  for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above  $85^{\circ}\text{C}$ .
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.

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