

Part Number: WP150A9VS/GYW

Green
Yellow

Features

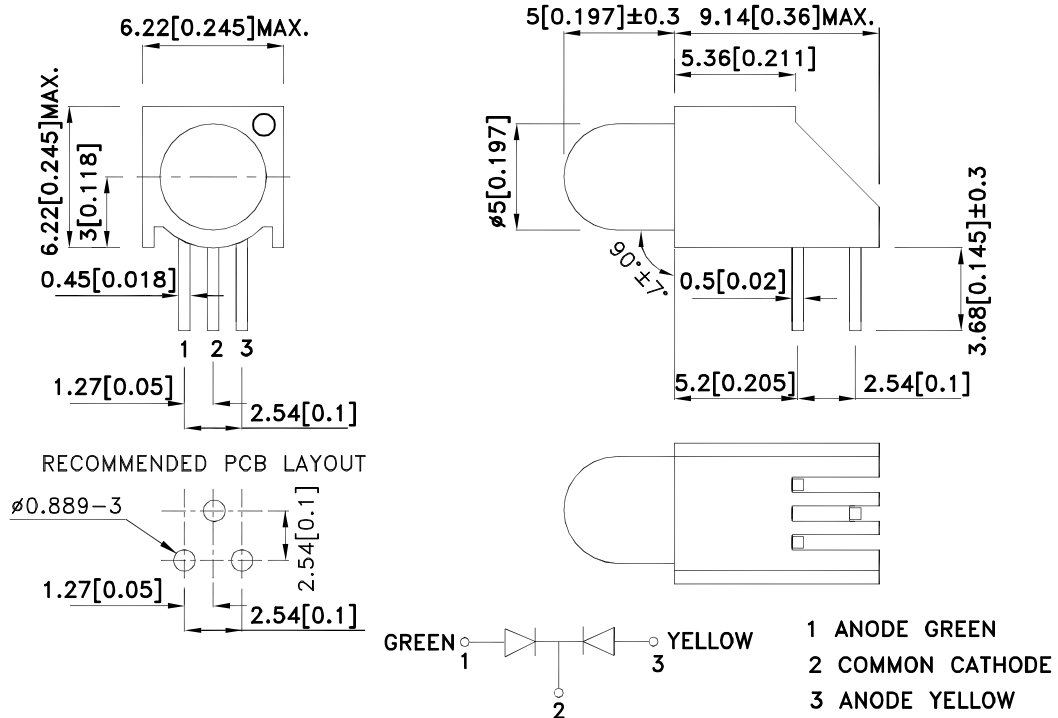
- Pre-trimmed leads for pc board mounting.
- High reliability - life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

Description

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

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow 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. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|---------------|--------------------|----------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| WP150A9VS/GYW | Green (GaP) | White Diffused | 18 | 50 | 30° |
| | Yellow (GaAsP/GaP) | | 8 | 20 | |

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%.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|-----------------|------------|------------|-------|---------------------------|
| λ_{peak} | Peak Wavelength | Green Yellow | 565 590 | | nm | I _F =20mA |
| λ_D [1] | Dominant Wavelength | Green Yellow | 568 588 | | nm | I _F =20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Green Yellow | 30 35 | | nm | I _F =20mA |
| C | Capacitance | Green Yellow | 15 20 | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Green Yellow | 2.2 2.1 | 2.5 2.5 | V | I _F =20mA |
| I _R | Reverse Current | Green Yellow | | 10 10 | uA | V _R = 5V |

Notes:

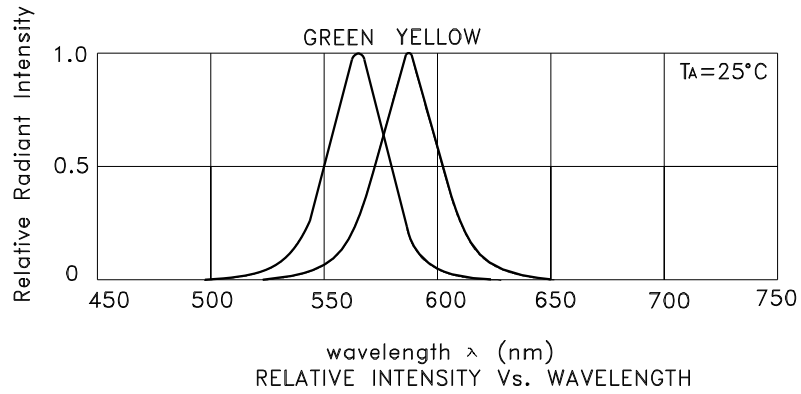
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

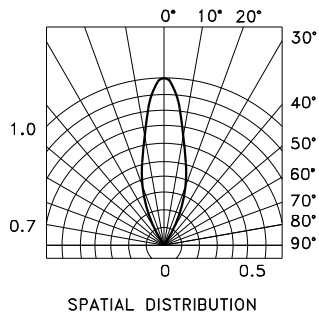
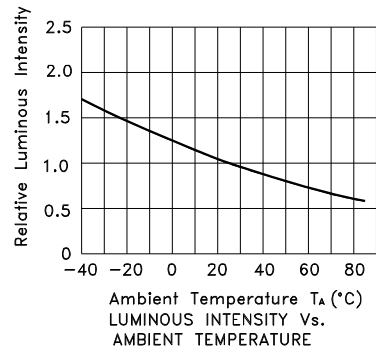
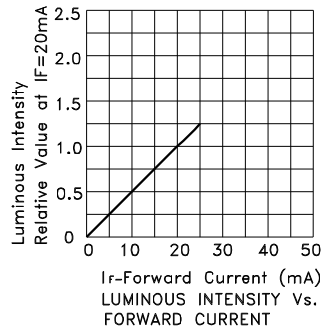
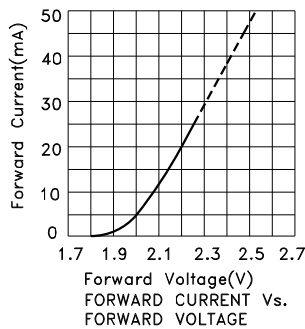
| Parameter | Green | Yellow | Units |
|---------------------------------|---------------------|--------|-------|
| Power dissipation | 62.5 | 75 | mW |
| DC Forward Current | 25 | 30 | mA |
| Peak Forward Current [1] | 140 | 140 | mA |
| Reverse Voltage | 5 | | V |
| Operating / Storage Temperature | -40°C To +85°C | | |
| Lead Solder Temperature [2] | 260°C For 3 Seconds | | |
| Lead Solder Temperature [3] | 260°C For 5 Seconds | | |

Notes:

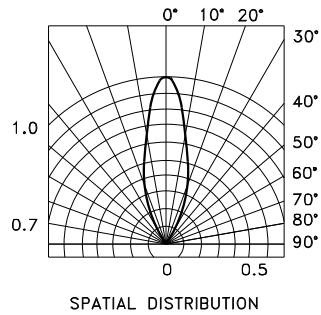
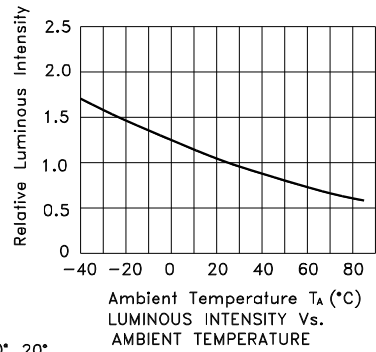
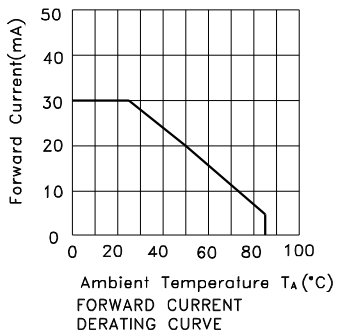
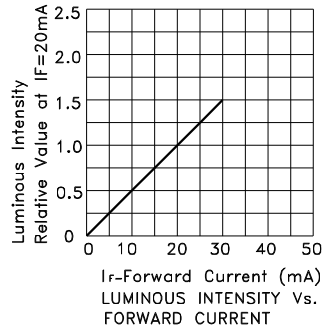
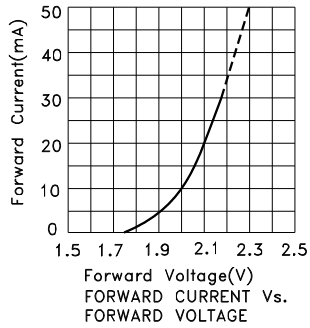
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



WP150A9VS/GYW Green



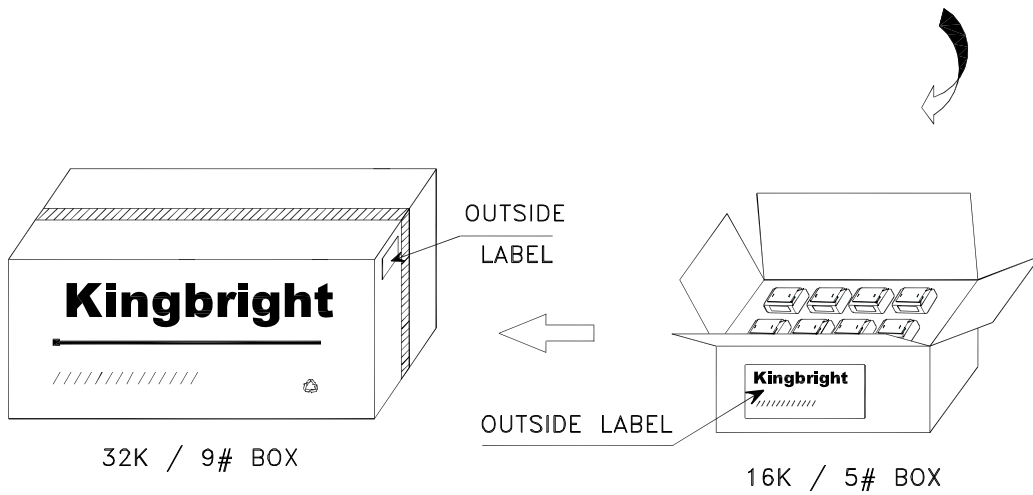
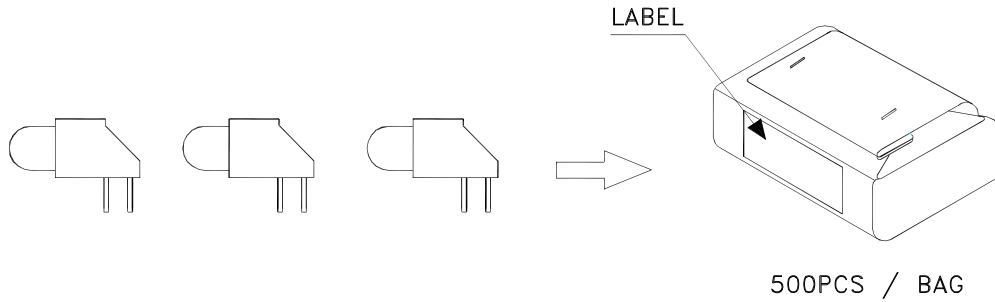
Yellow




Kingbright

PACKING & LABEL SPECIFICATIONS

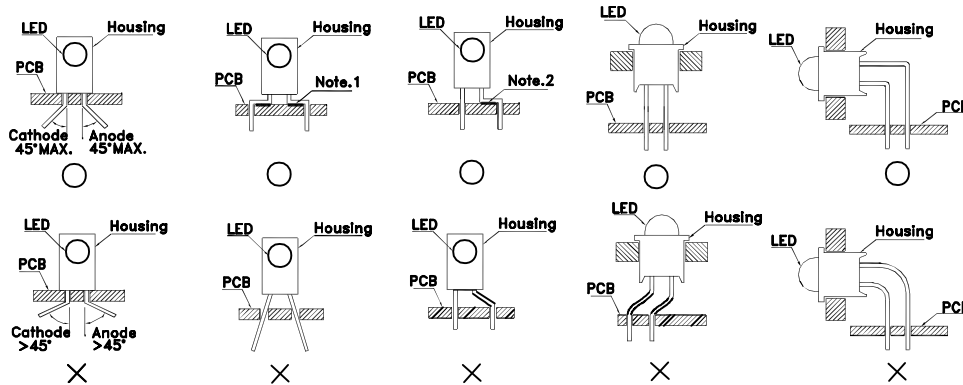
WP150A9VS/GYW



| | |
|--|--|
| <h1>Kingbright</h1> | |
| P/N0: WP150A9VSxxx | |
| QTY: 500 pcs | Q.C. Q C XX XX XXXX PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  xxxxxxxxxxxxxxxxxxxxxxxxxxxx | |
| RoHS Compliant | |

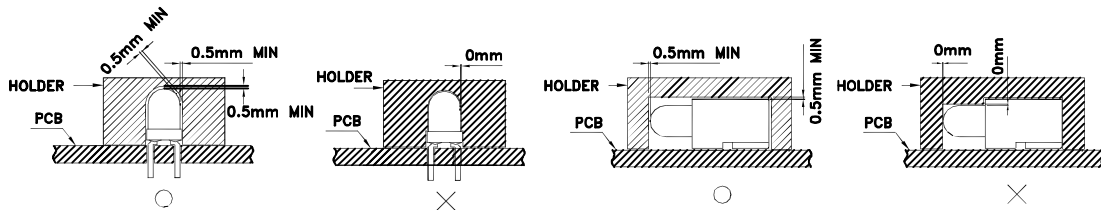
PRECAUTIONS

- 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.

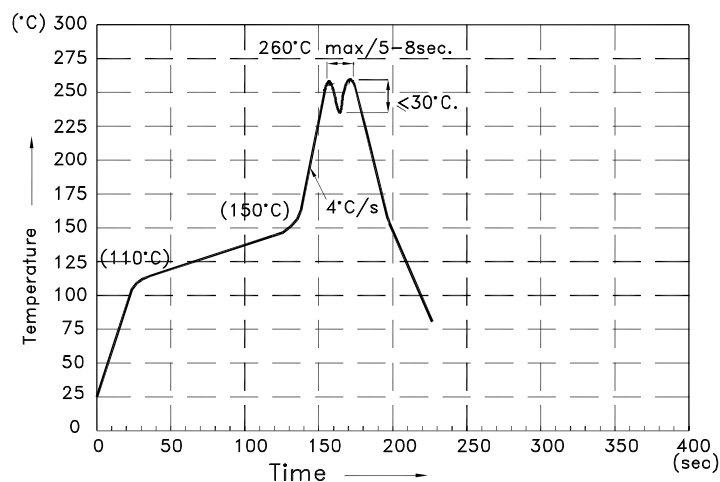


”○” Correct mounting method ”×” Incorrect mounting method

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



- The tip of the soldering iron should never touch the lens epoxy.
- Through-hole LEDs are incompatible with reflow soldering.
- 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.
- Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



NOTES:

- Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
- Do not apply stress on epoxy resins when temperature is over 85°C.
- The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
- During wave soldering, the PCB top-surface temperature should be kept below 105°C.
- No more than once.