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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## T-1 (3mm) BI-LEVEL LED INDICATOR

Part Number: WP934GO/2GD

Green

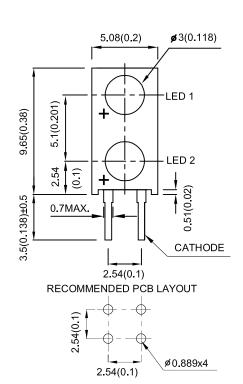
### **Features**

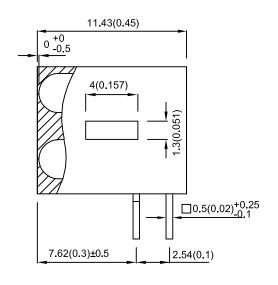
- Pre-trimmed leads for pc mounting.
- Black case enhances contrast ratio.
- High reliability life measured in years.
- Wide viewing angle.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

## Description

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

## **Package Dimensions**





- 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.



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## **Selection Guide**

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 10mA		Viewing Angle [1]
		2.	Min.	Тур.	201/2
WP934GO/2GD	Green (GaP)	Green Diffused	10	25	40°

### Notes:

- 1.01/2 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 the CIE127-2007 compliant national standards.

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

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green	565		nm	IF=20mA
λD [1]	Dominant Wavelength	Green	568		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Green	30		nm	IF=20mA
С	Capacitance	Green	15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Green	2.2	2.5	V	IF=20mA
lr	Reverse Current	Green		10	uA	V <sub>R</sub> = 5V

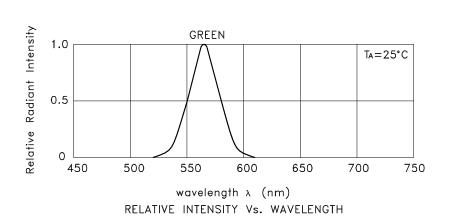
- Notes: 1.Wavelength: +/-1nm. 2.Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

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

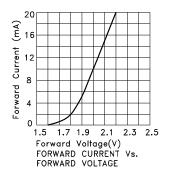
- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
   2. 2mm below package base.
- 3. 5mm below package base.

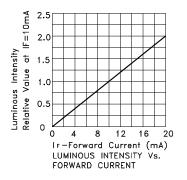
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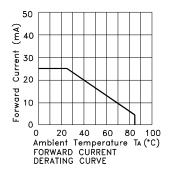


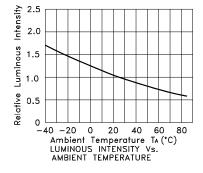
Green

## WP934GO/2GD



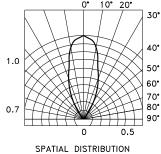






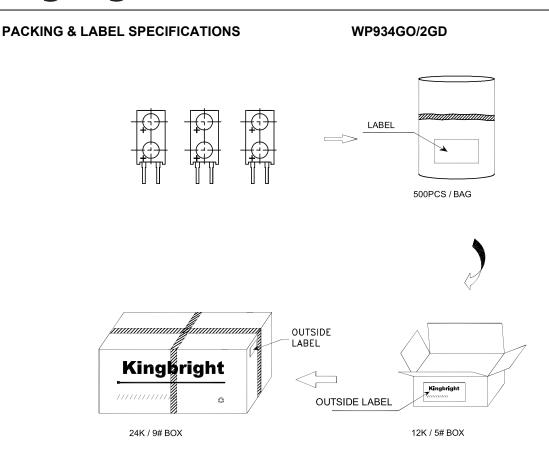
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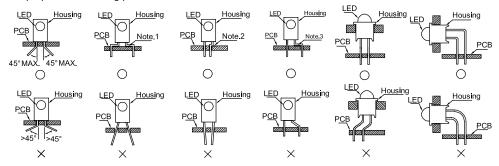
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### **PRECAUTIONS**

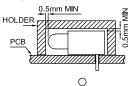
- 1. Storage conditions:
  - a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
  - b.LEDs should be stored with temperature ≤ 30° C and relative humidity < 60%.
  - c.Product in the original sealed package is recommended to be assembled within 72 hours of opening. Product in opened package for more than a week should be baked for 30 ( $\pm$ 10/-0) hours at 85 ~ 100°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.

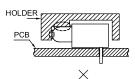


"  $\bigcirc$  " Correct mounting method "  $\times$  " Incorrect mounting method

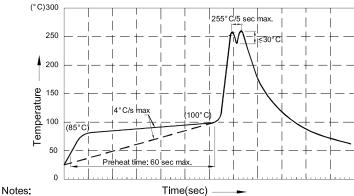
Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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:



- 1.Recommend pre-heat temperature of 105°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°C
- 2.Peak wave soldering temperature between 245° C ~ 255° C for 3 sec (5 sec max).
- 3.Do not apply stress to the epoxy resin while the temperature is above 85°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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