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#### **3mm RIGHT ANGLE LED INDICATOR**

Part Number: WP934AD/GD Green

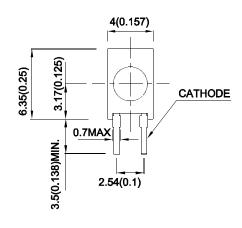
#### **Features**

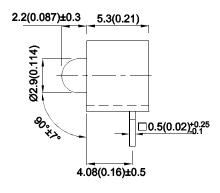
- Ideal for card edge status indication.
- Pre-trimmed leads for pc board mounting.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

#### Description

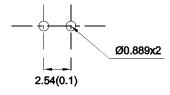
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### **Package Dimensions**





#### RECOMMENDED PCB LAYOUT



- 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.	Emitting Color (Material)	Iv (mcd) [2] Material) Lens Type @ 10mA		,	Viewing Angle [1]
		2.	Min.	Тур.	201/2
WP934AD/GD	Green (GaP)	Green Diffused	10	25	40°

#### Notes:

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

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

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

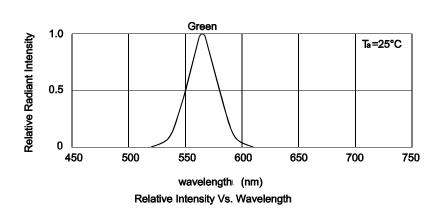
Parameter	Values	Units	
Power dissipation	62.5	mW	
DC Forward Current	25	mA	
Peak Forward Current [1]	140	mA	
Reverse Voltage	5	V	
Operating/Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3 Seconds		
Lead Solder Temperature [3]	260°C For 5 Seconds		

#### Notes:

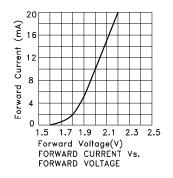
- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
   2. 2mm below package base.
- 3. 5mm below package base.
- 4. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

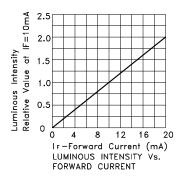
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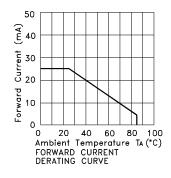
# Kingbright

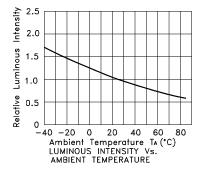


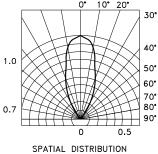
Green WP934AD/GD







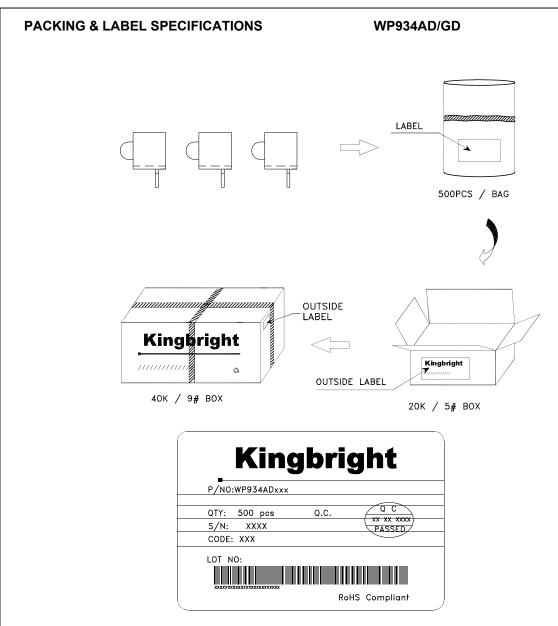




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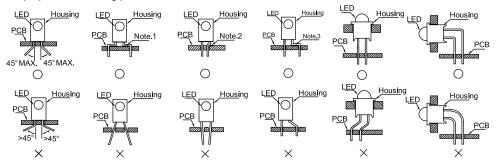
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# Kingbright

#### **PRECAUTIONS**

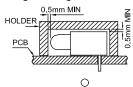
- 1. Storage conditions:
  - a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
  - b.LEDs should be stored with temperature ≤30°C and relative humidity < 60%.
  - c.Product in the original sealed package is recommended 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.
- 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.

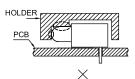


"  $\bigcirc$  " Correct mounting method " imes " Incorrect mounting method

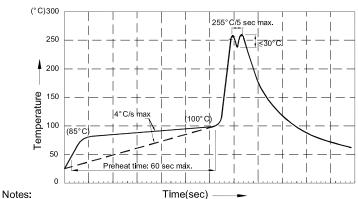
Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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.
- 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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