

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

Part Number: WP934GO/2SRD Super Bright Red

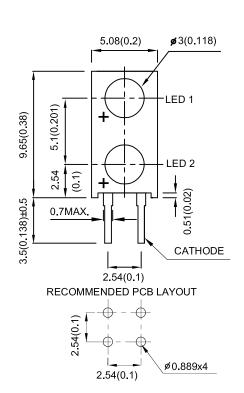
### **Features**

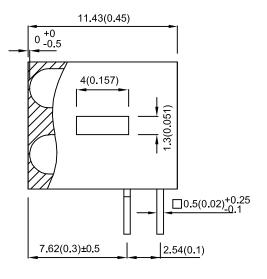
- Pre-trimmed leads for pc mounting.
- Black case enhances contrast ratio.
- High reliability life measured in years.
- Wide viewing angle.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

## Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
WP934GO/2SRD	Super Bright Red (GaAlAs)	Dod Diffused	150	400	40°
		Red Diffused	*50	*100	

### 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%.
  \*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	Super Bright Red	655		nm	IF=20mA
λD [1]	Dominant Wavelength	Super Bright Red	640		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red	20		nm	IF=20mA
С	Capacitance	Super Bright Red	45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Super Bright Red	1.85	2.5	V	IF=20mA
lr	Reverse Current	Super Bright Red		10	uA	VR = 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.

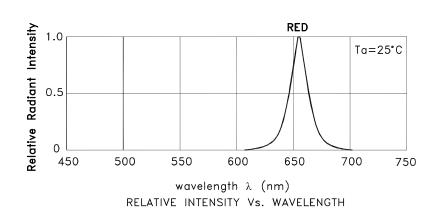
## Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Red	Units	
Power dissipation	75	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	155	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		

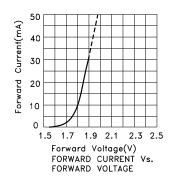
## Notes:

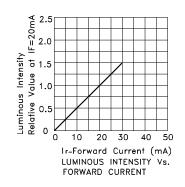
- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
  2. 2mm below package base.
  3. 5mm below package base.

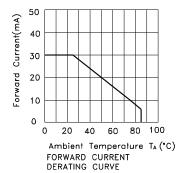
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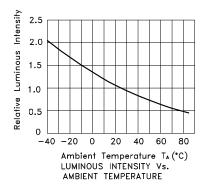


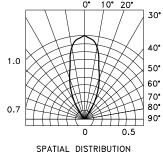
Super Bright Red WP934GO/2SRD





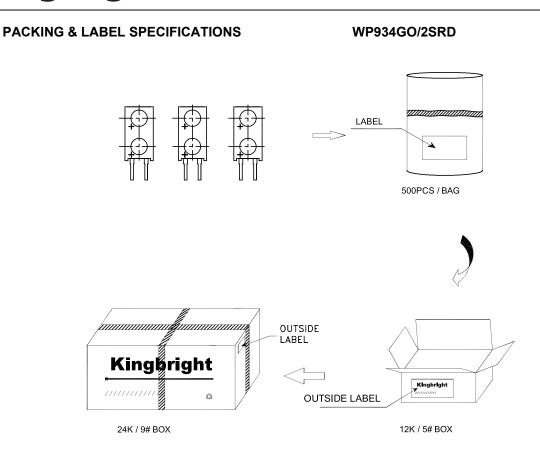






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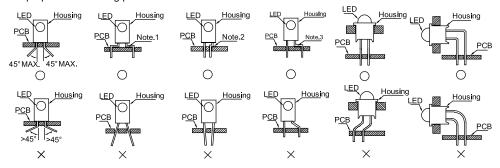
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### **PRECAUTIONS**

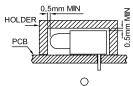
- 1. Storage conditions:
  - a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
  - b.LEDs should be stored with temperature ≤ 30°C and relative humidity < 60%.
  - c.Product in the original sealed package is recommended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

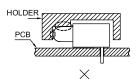


"  $\bigcirc$  " Correct mounting method " imes " Incorrect mounting method

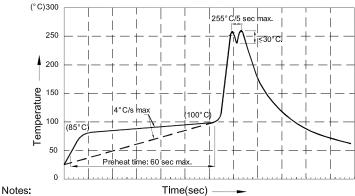
Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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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