

T-1 3/4 (5mm) BI-COLOR INDICATOR LAMP

Part Number: WP59GYC

Green Yellow

Features

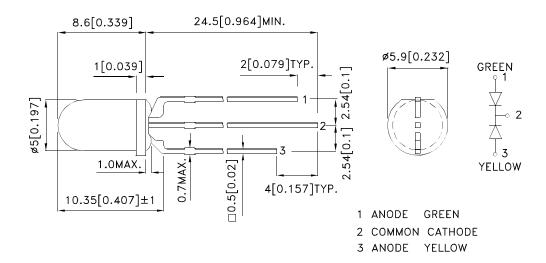
- Uniform light output.
- Low power consumption.
- 3 leads with one common lead.
- Long life-solid state reliability.
- RoHS compliant.

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



- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±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
WP59GYC	Green (GaP)	Water Clear	80	200	24°
	Yellow (GaAsP/GaP)	Water Clear	55	120	

- Notes: 1. θ 1/2 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	Тур.	Max.	Units	Test Conditions	
λpeak	Peak Wavelength	Green Yellow	565 590		nm	IF=20mA	
λD [1]	Dominant Wavelength	Green Yellow	568 588		nm	I==20mA	
Δλ1/2	Spectral Line Half-width	Green Yellow	30 35		nm	I==20mA	
С	Capacitance	Green Yellow	15 20		pF	VF=0V;f=1MHz	
VF [2]	Forward Voltage	Green Yellow	2.2 2.1	2.5 2.5	V	IF=20mA	
lR	Reverse Current	Green Yellow		10 10	uA	V _R = 5V	

Notes:

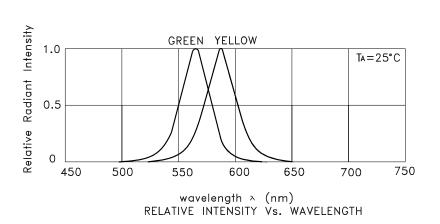
- 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

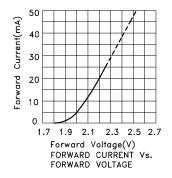
Parameter	Green	Yellow	Units		
Power dissipation	62.5	75	mW		
DC Forward Current	25	30	mA		
Peak Forward Current [1]	140	140	mA		
Reverse Voltage	ţ	V			
Operating / Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 3 Seconds				
Lead Solder Temperature [3]	260°C For 5 Seconds				

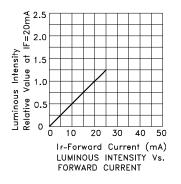
- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 2mm below package base.
 3. 5mm below package base.

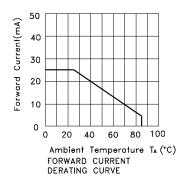
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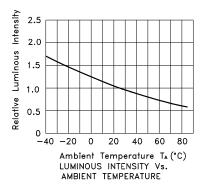


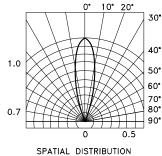
WP59GYC Green







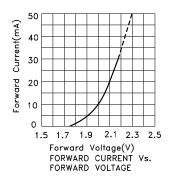


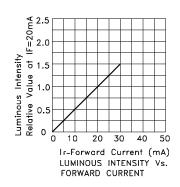


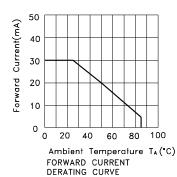
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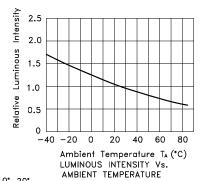
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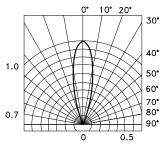
Yellow





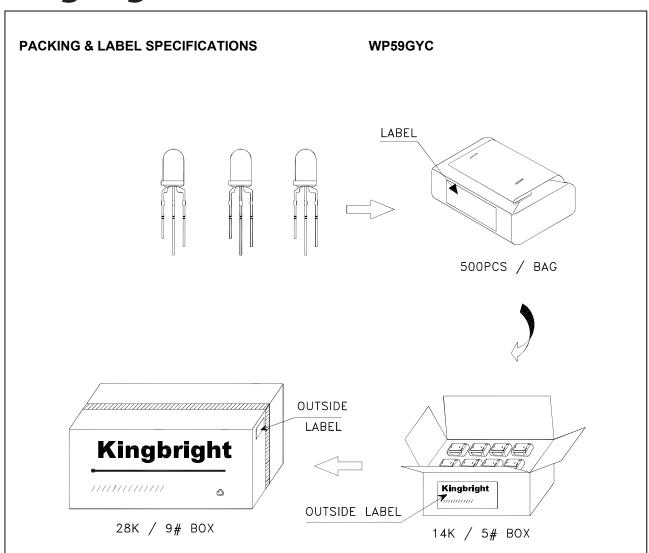


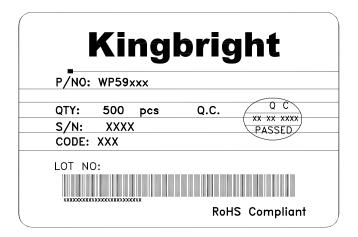




SPATIAL DISTRIBUTION

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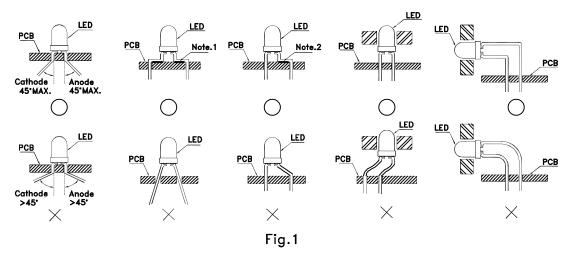




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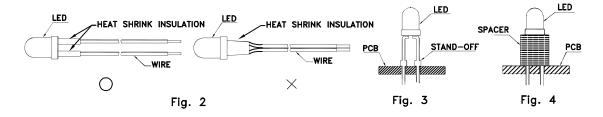
PRECAUTIONS

1. 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. (Fig. 1)



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

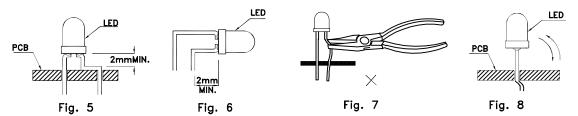
- 2. When soldering wire to the LED, use individual heat—shrink tubing to insulate the exposed leads to prevent accidental contact short—circuit. (Fig.2)
- 3.Use stand—offs (Fig.3) or spacers (Fig.4) to securely position the LED above the PCB.



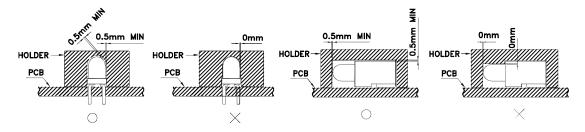
- 4. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)
- 5. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB. (Fig. 7)

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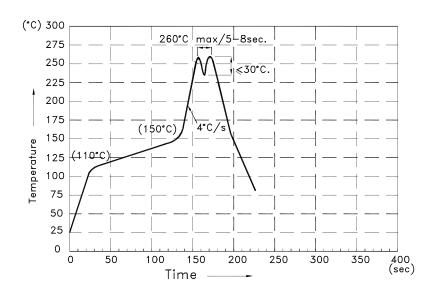
6. Do not bend the leads more than twice. (Fig. 8)



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



- 8. The tip of the soldering iron should never touch the lens epoxy.
- 9. Through—hole LEDs are incompatible with reflow soldering.
- 10. 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.
- 11. Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



NOTES:

- 1.Recommend the wave temperature 245°C \sim 260°C.The maximum soldering temperature should be less than 260°C.
- 2.Do not apply stress on epoxy resins when temperature is over $85^{\circ}\text{C}.$
- 3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
- 4.During wave soldering, the PCB top-surface temperature should be kept below 105°C.
- 5.No more than once.

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