

Part Number: WP59BL/GYW

Green  
Yellow

### Features

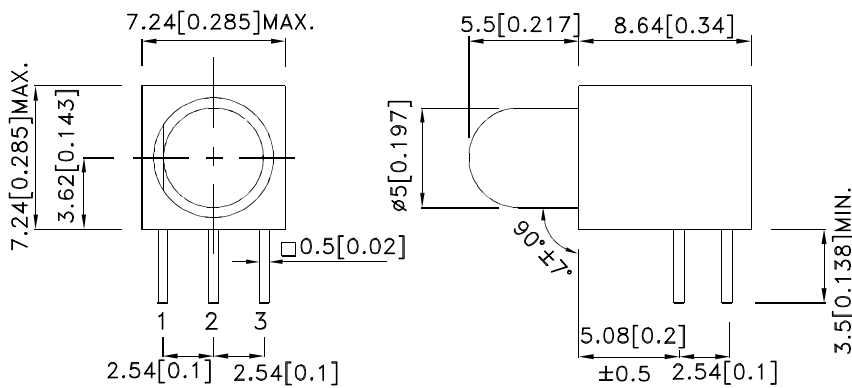
- Pre-trimmed leads for pc board mounting.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability - life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

### Description

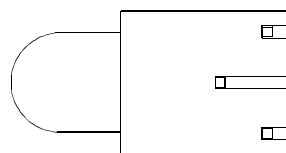
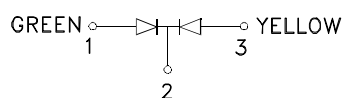
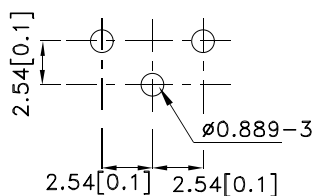
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

### Package Dimensions



### RECOMMENDED PCB LAYOUT



- 1 ANODE GREEN
- 2 COMMON CATHODE
- 3 ANODE YELLOW

### 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
WP59BL/GYW	Green (GaP)	White Diffused	50	100	60°
	Yellow (GaAsP/GaP)		20	40	

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 <sub>peak</sub>	Peak Wavelength	Green Yellow	565 590		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	Green Yellow	568 588		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Green Yellow	30 35		nm	I <sub>F</sub> =20mA
C	Capacitance	Green Yellow	15 20		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Green Yellow	2.2 2.1	2.5 2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Green Yellow		10 10	μA	V <sub>R</sub> = 5V

Notes:

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

## Absolute Maximum Ratings at TA=25°C

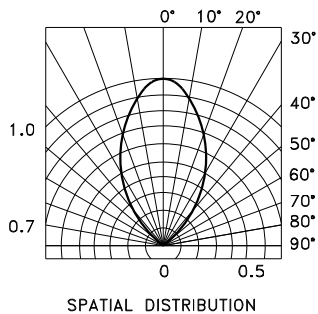
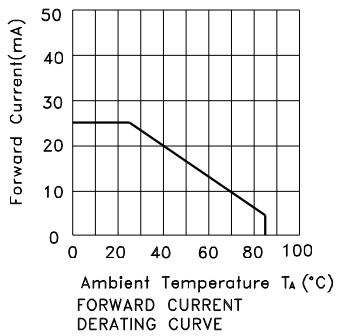
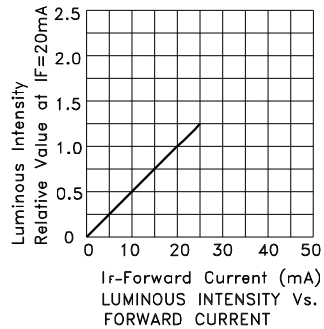
Parameter	Green	Yellow	Units
Power dissipation	62.5	75	mW
DC Forward Current	25	30	mA
Peak Forward Current [1]	140	140	mA
Reverse Voltage	5		V
Operating / Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3 Seconds		
Lead Solder Temperature [3]	260°C For 5 Seconds		

Notes:

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



## WP59BL/GYW Green



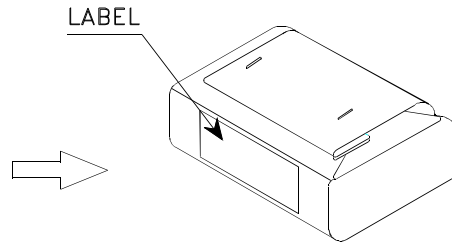
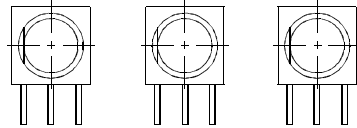
## Yellow



# Kingbright

## PACKING & LABEL SPECIFICATIONS

WP59BL/GYW

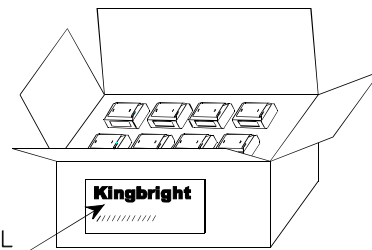


500PCS / BAG




14K / 9# BOX

OUTSIDE LABEL



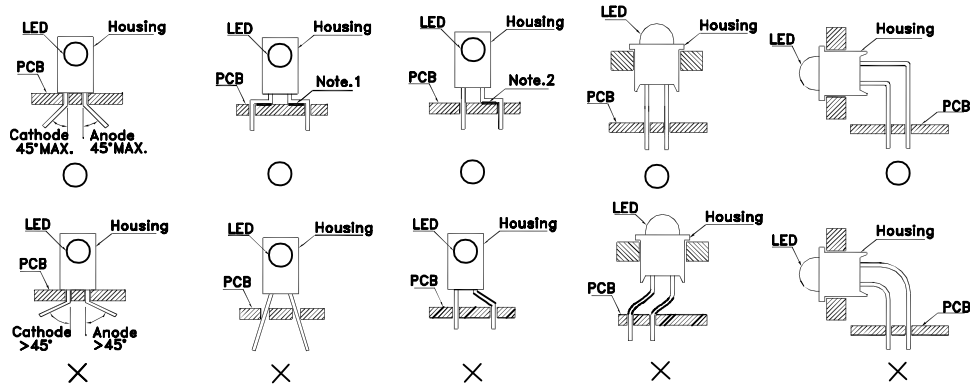
OUTSIDE LABEL

7K / 5# BOX

<h1>Kingbright</h1>	
P/NO: WP59BLxxx	
QTY: 500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
RoHS Compliant	

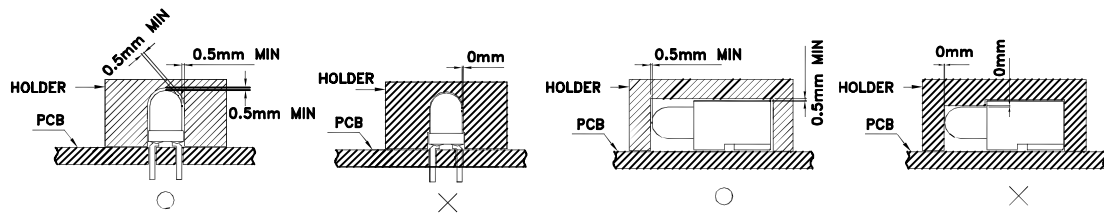
## PRECAUTIONS

- 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.

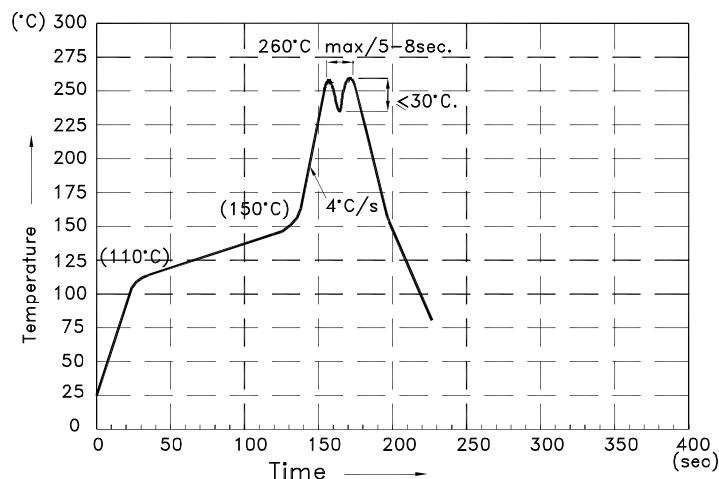


"O" Correct mounting method "X" Incorrect mounting method

- 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.