

Part Number: WP59CB/EGW

High Efficiency Red  
Green

### Features

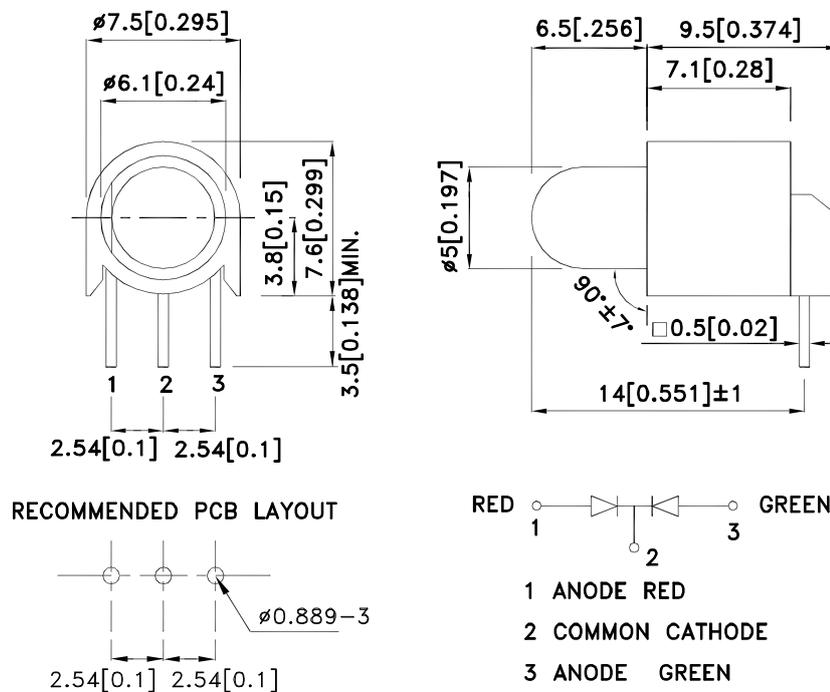
- Pre-trimmed leads for pc board mounting.
- 3 leads with one common lead.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability - life measured in years.
- Housing UL rating: 94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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

### Package Dimensions



#### 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
WP59CB/EGW	High Efficiency Red (GaAsP/GaP)	White Diffused	50	100	60°
	Green (GaP)		20	60	

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	High Efficiency Red Green	627 565		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	High Efficiency Red Green	625 568		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	High Efficiency Red Green	45 30		nm	I <sub>F</sub> =20mA
C	Capacitance	High Efficiency Red Green	15 15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	High Efficiency Red Green	2 2.2	2.5 2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	High Efficiency Red Green		10 10	uA	V <sub>R</sub> = 5V

Notes:

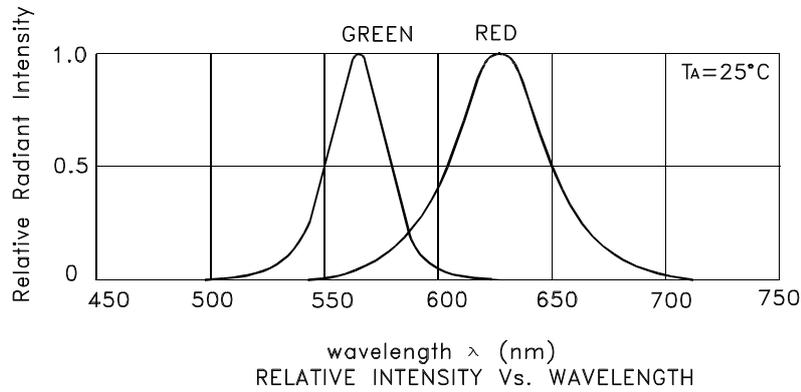
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

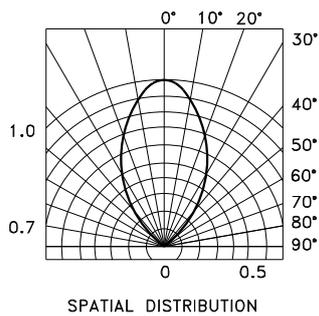
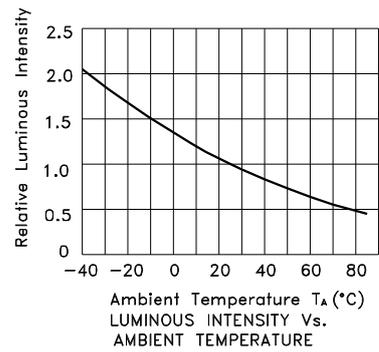
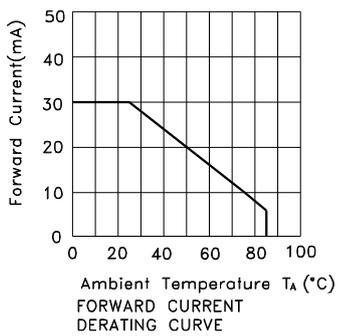
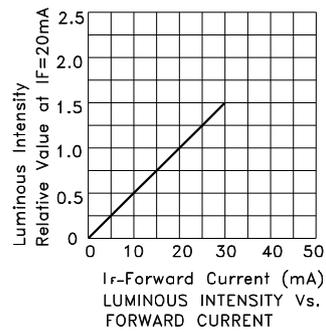
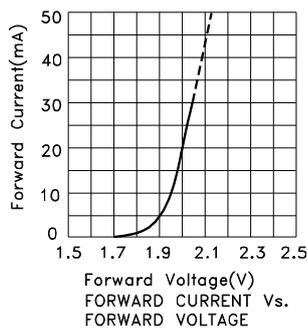
Parameter	High Efficiency Red	Green	Units
Power dissipation	75	62.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	160	140	mA
Reverse Voltage	5		V
Operating / Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3 Seconds		
Lead Solder Temperature [3]	260°C For 5 Seconds		

Notes:

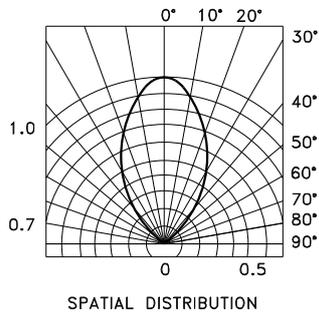
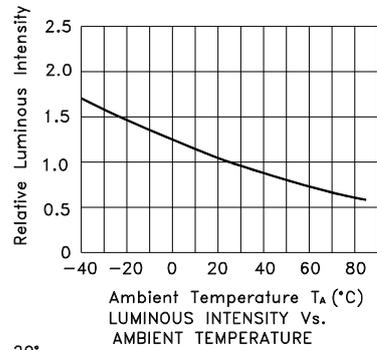
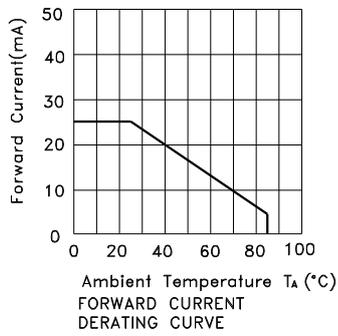
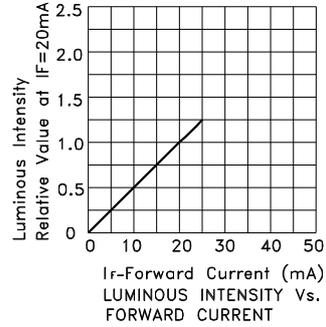
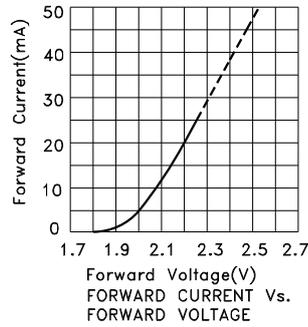
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



## WP59CB/EGW High Efficiency Red



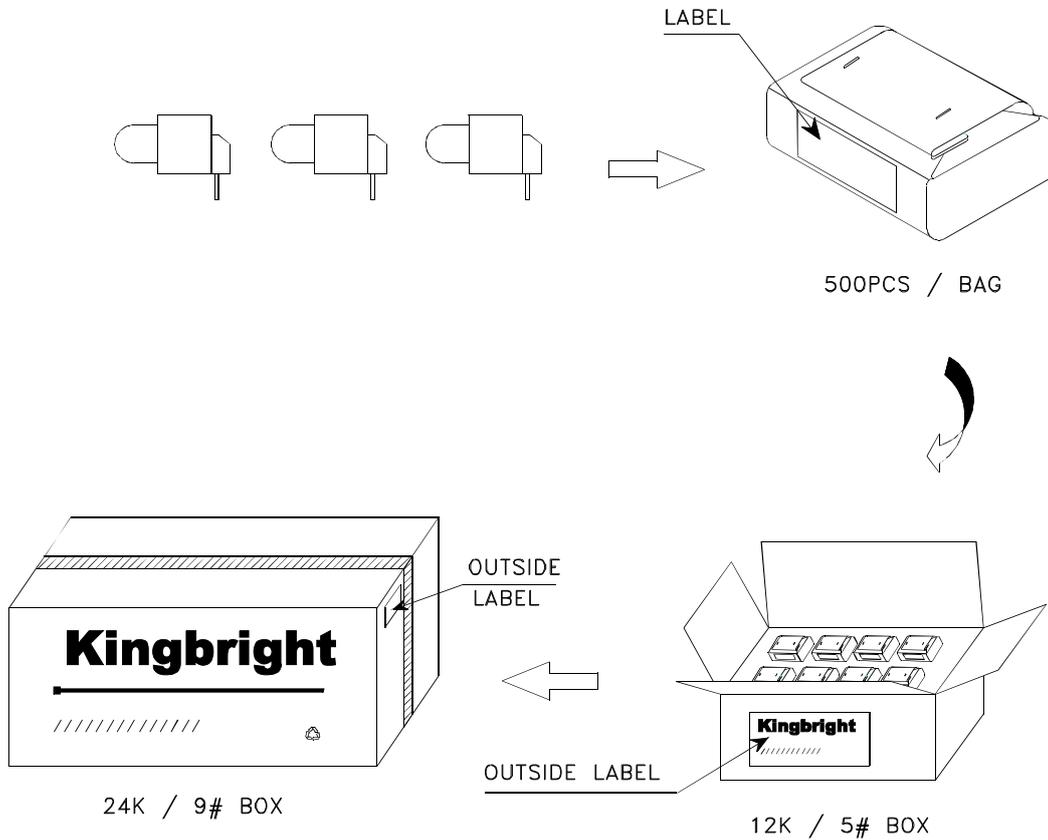
## Green



# Kingbright

## PACKING & LABEL SPECIFICATIONS

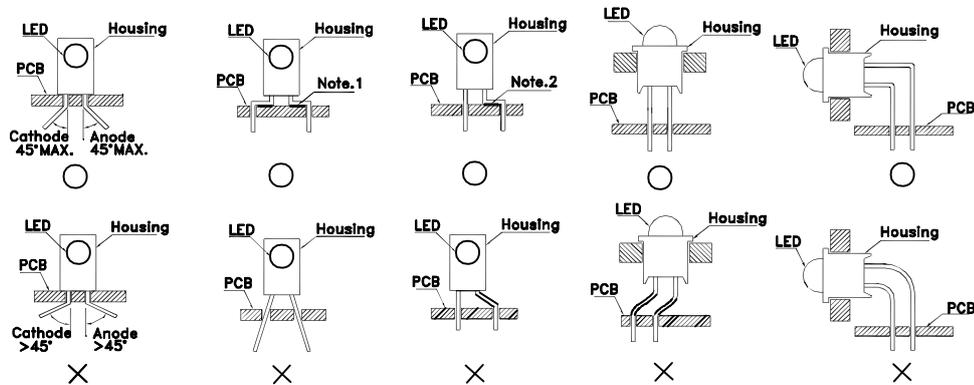
## WP59CB/EGW



<b>Kingbright</b>	
P/NO: WP59CBxxx	
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:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

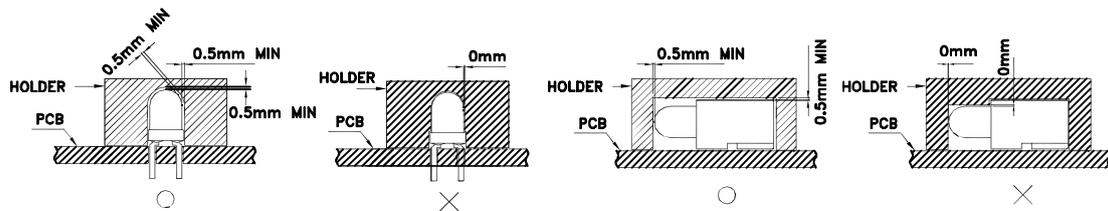
## PRECAUTIONS

- 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.

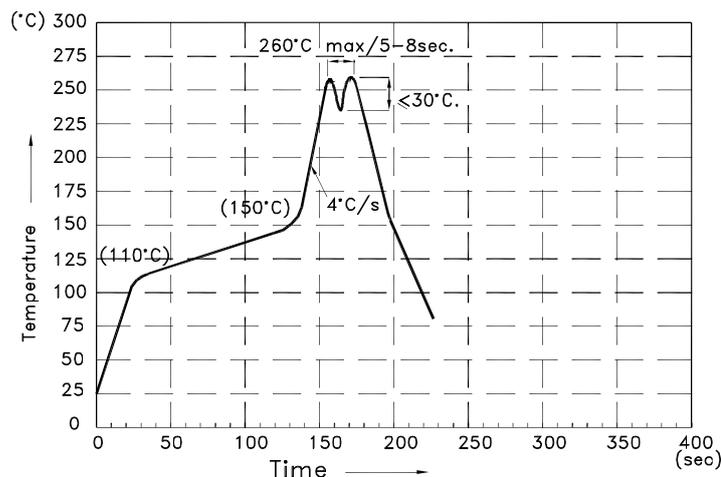


"O" Correct mounting method "X" Incorrect mounting method

- 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.