

Part Number: L-59BL/1GYW

Green
Yellow

Features

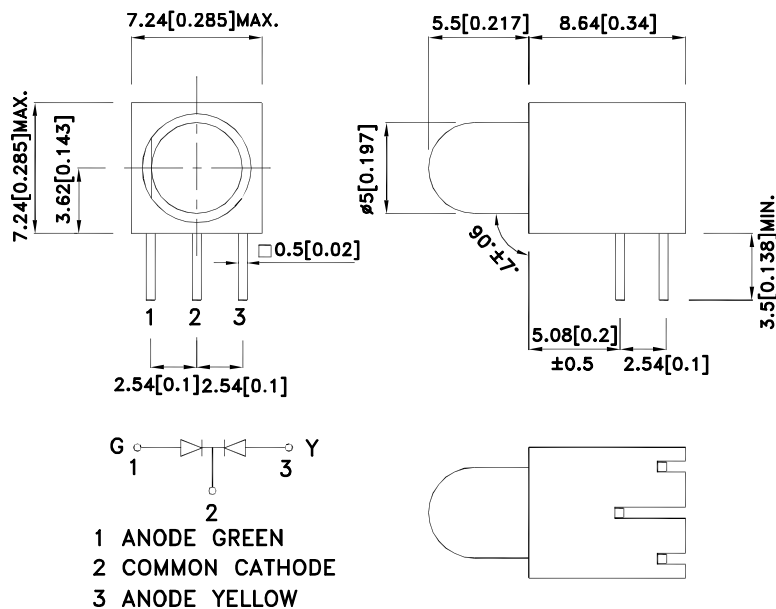
- Pre-trimmed leads for pc board mounting.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability - life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

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



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
L-59BL/1GYW	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
λpeak	Peak Wavelength	Green Yellow	565 590		nm	IF=20mA
λD [1]	Dominant Wavelength	Green Yellow	568 588		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Green Yellow	30 35		nm	IF=20mA
C	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
IR	Reverse Current	Green Yellow		10 10	uA	VR = 5V

Notes:

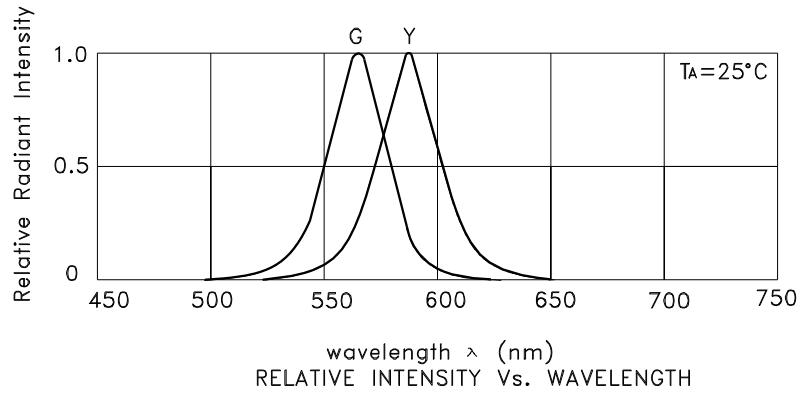
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

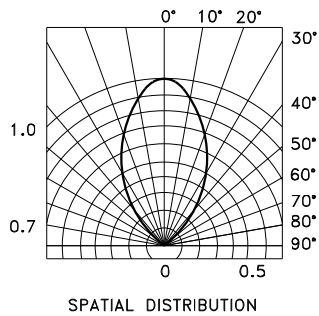
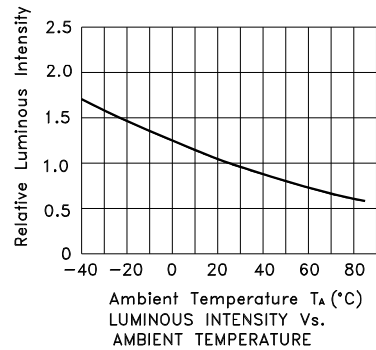
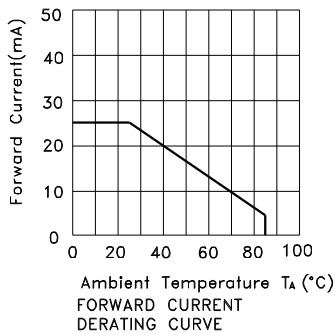
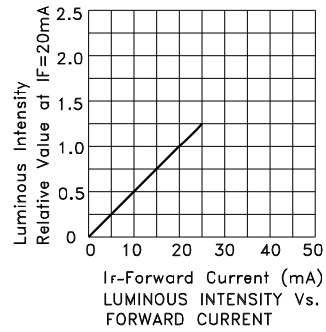
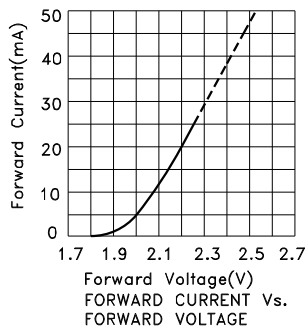
Parameter	Green	Yellow	Units
Power dissipation	62.5	75	mW
DC Forward Current	25	30	mA
Peak Forward Current [1]	140	140	mA
Reverse Voltage	5		V
Operating / Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3 Seconds		
Lead Solder Temperature [3]	260°C For 5 Seconds		

Notes:

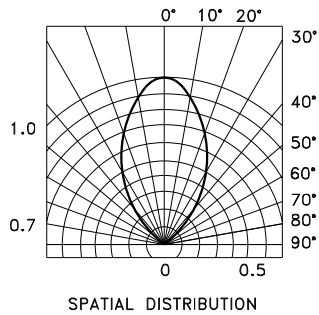
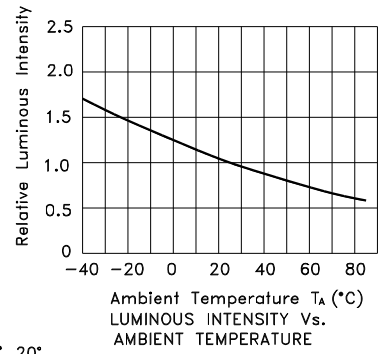
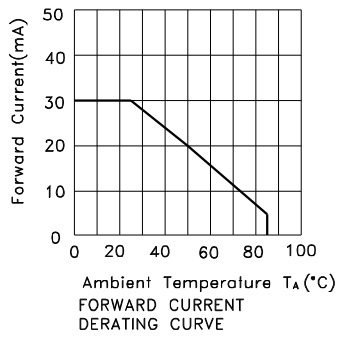
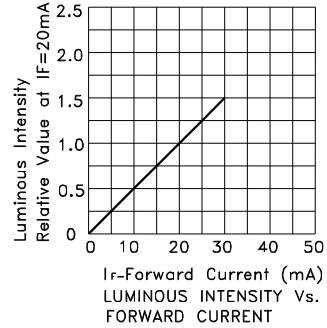
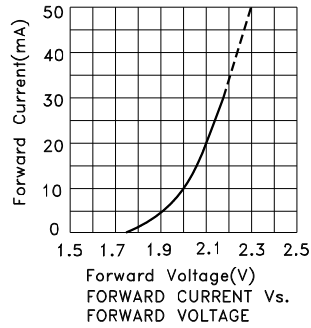
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



L-59BL/1GYW Green

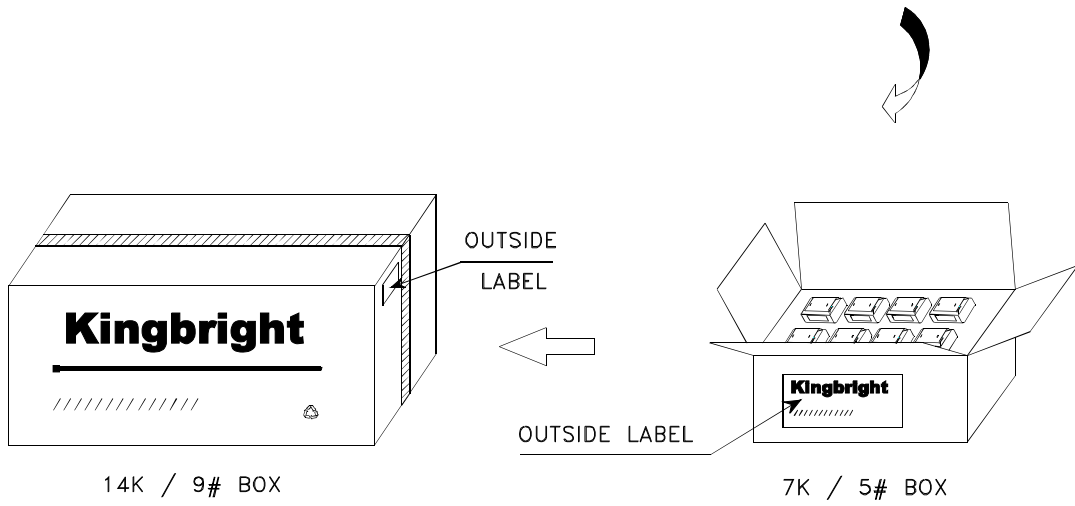
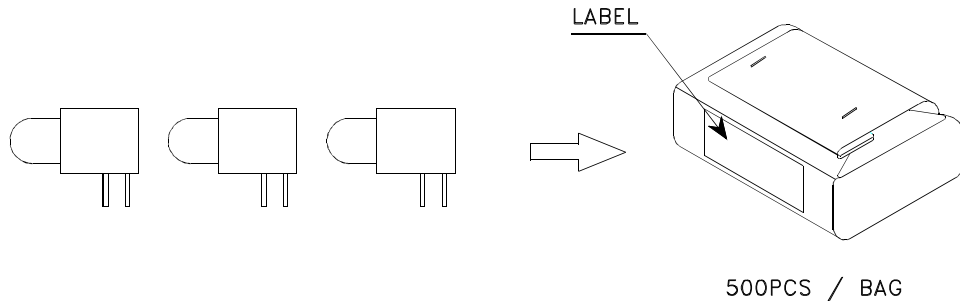


Yellow



PACKING & LABEL SPECIFICATIONS

L-59BL/1GYW



<h1>Kingbright</h1>					
P/NO: L-59BLxxx					
QTY: 500 pcs	Q.C.	<table border="1"> <tr> <td style="text-align: center;">Q C</td> </tr> <tr> <td style="text-align: center;">xx xx xxxx</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table>	Q C	xx xx xxxx	PASSED
Q C					
xx xx xxxx					
PASSED					
S/N: XXXX					
CODE: XXX					
LOT NO:					
 xxxxxxxxxxxxxxxxxxxxxxxx					
RoHS Compliant					

LED MOUNTING METHOD

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)

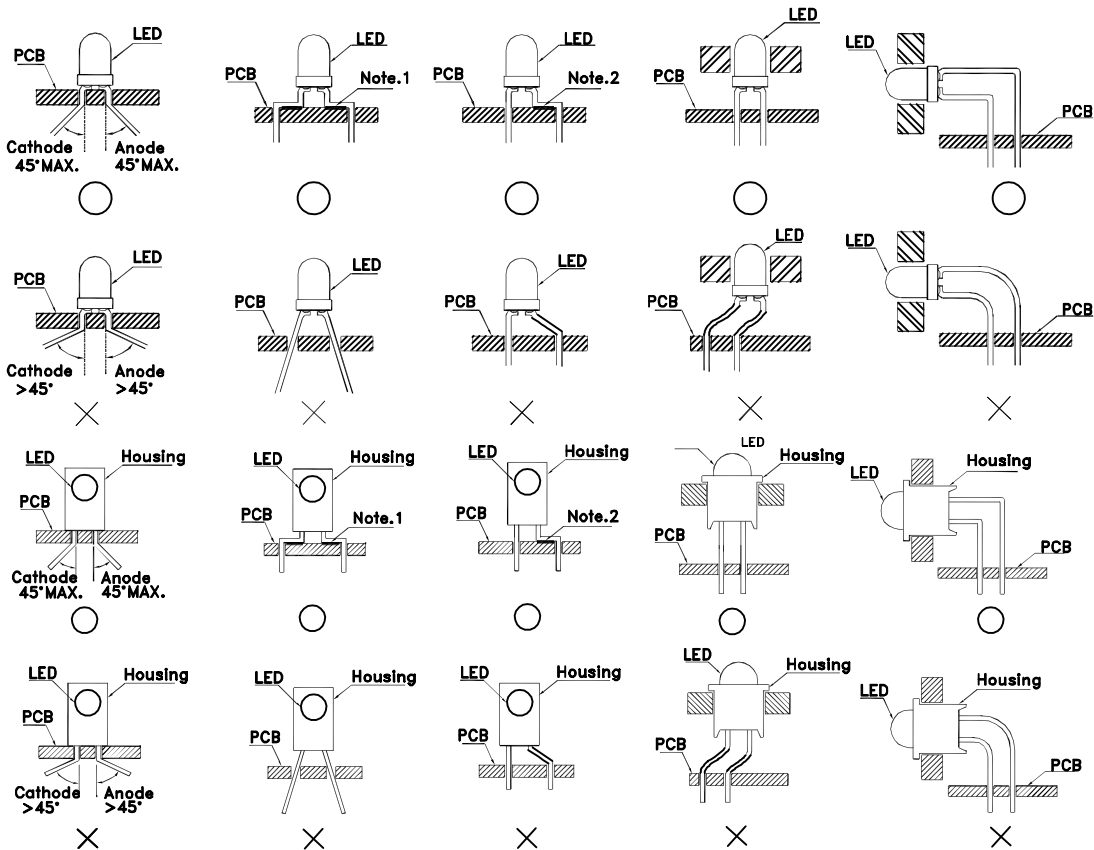


Fig.1

“O” Correct mounting method “X” Incorrect mounting method
 Note 1-2 : Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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.

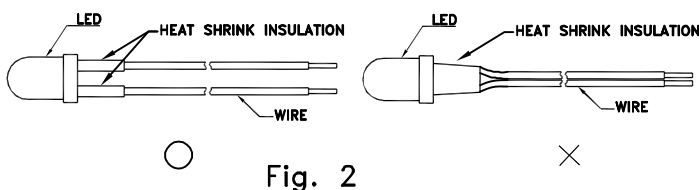


Fig. 2

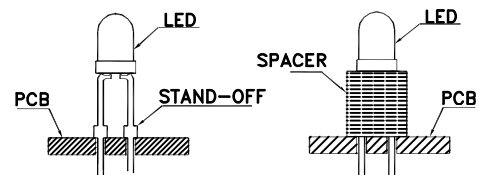
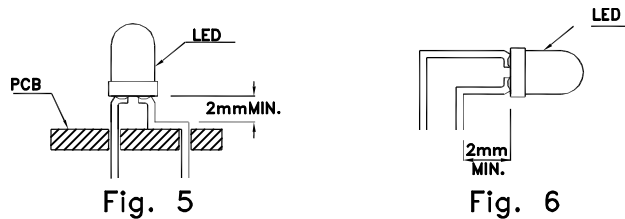


Fig. 3

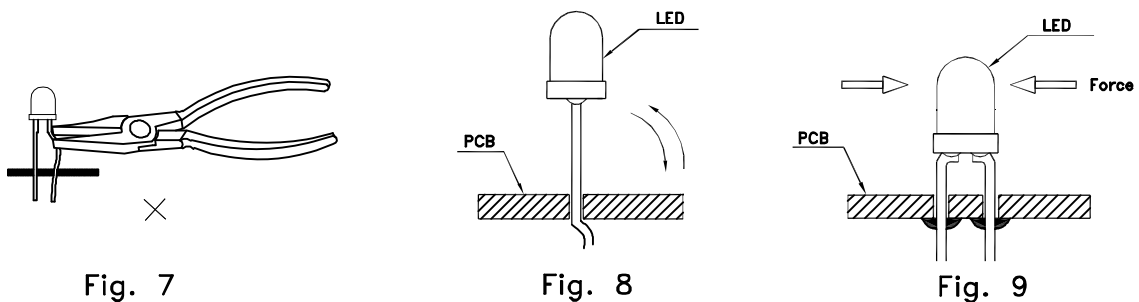
Fig. 4

LEAD FORMING PROCEDURES

1. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)



2. Lead forming or bending must be performed before soldering, never during or after Soldering.
3. Do not stress the LED lens during lead-forming in order to fractures in the lens epoxy and damage the internal structures.
4. 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)
5. Do not bend the leads more than twice. (Fig. 8)
6. After soldering or other high-temperature assembly, allow the LED to cool down to 50°C before applying outside force (Fig. 9). In general, avoid placing excess force on the LED to avoid damage. For any questions please consult with Kingbright representative for proper handling procedures.



7. No stress shall be applied on the LED during soldering to prevent damage.

