T-1 3/4 (5mm) SOLID STATE LAMP

Part Number: L-7113SGD-14V

Super Bright Green

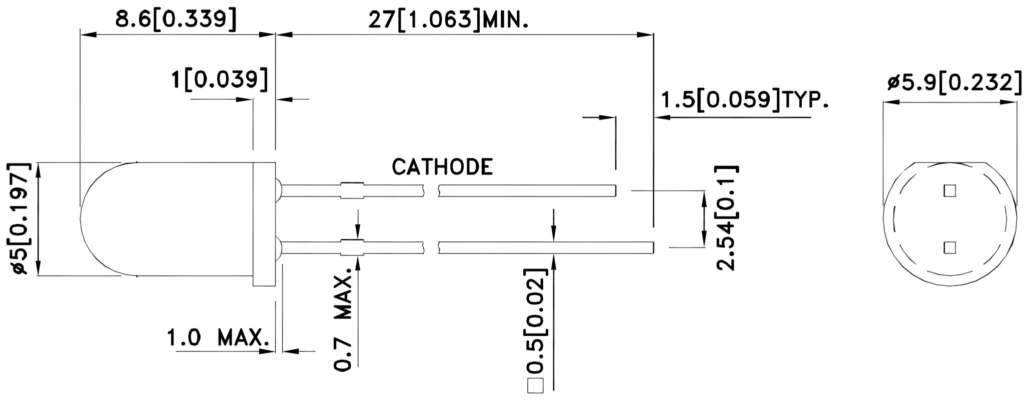
Features

- Low power consumption.
- Popular T-1 3/4 diameter package.
- General purpose leads.
- Reliable and rugged.
- Long life - solid state reliability.
- Available on tape and reel.
- 14V internal resistor.
- RoHS compliant.

Description

The Super Bright 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 ±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] V= 14V		Viewing Angle [1]
			Min.	Typ.	2θ1/2
L-7113SGD-14V	Super Bright Green (GaP)	Green Diffused	10	22	30°

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

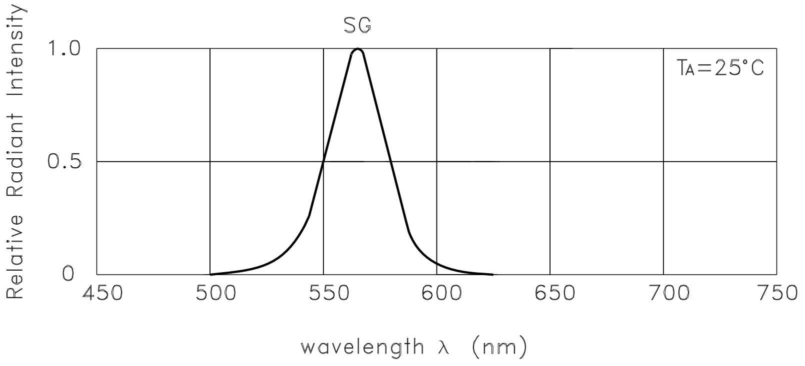
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Green	565		nm	V_F=14V
λD [1]	Dominant Wavelength	Super Bright Green	568		nm	V_F=14V
Δλ1/2	Spectral Line Half-width	Super Bright Green	30		nm	V_F=14V
I_F	Forward Current	Super Bright Green	10.5	13.5	mA	V_F=14V
I_R	Reverse Current	Super Bright Green		10	uA	V_R = 5V

Note:
1.Wavelength: +/-1nm.

Absolute Maximum Ratings at TA=25°C

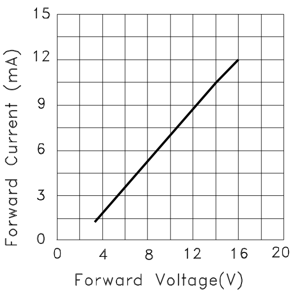
Parameter	Super Bright Green	Units
Power dissipation	160	mW
Forward Voltage	16	V
Reverse Voltage	5	V
Operating Temperature	-40°C To +70°C	
Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [1]	260°C For 3 Seconds	
Lead Solder Temperature [2]	260°C For 5 Seconds	

Notes:
1. 2mm below package base.
2. 5mm below package base.

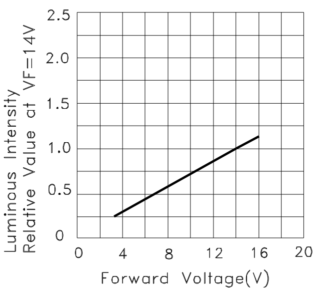


RELATIVE INTENSITY Vs. WAVELENGTH

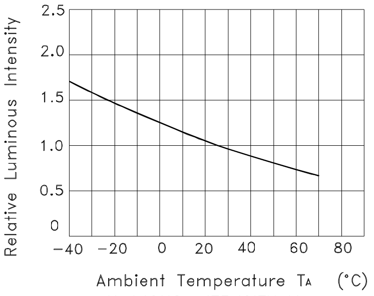
Super Bright Green **L-7113SGD-14V**



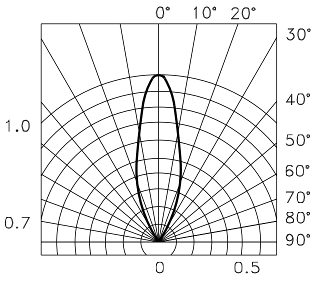
FORWARD VOLTAGE Vs.
FORWARD CURRENT



FORWARD VOLTAGE Vs.
LUMINOUS INTENSITY

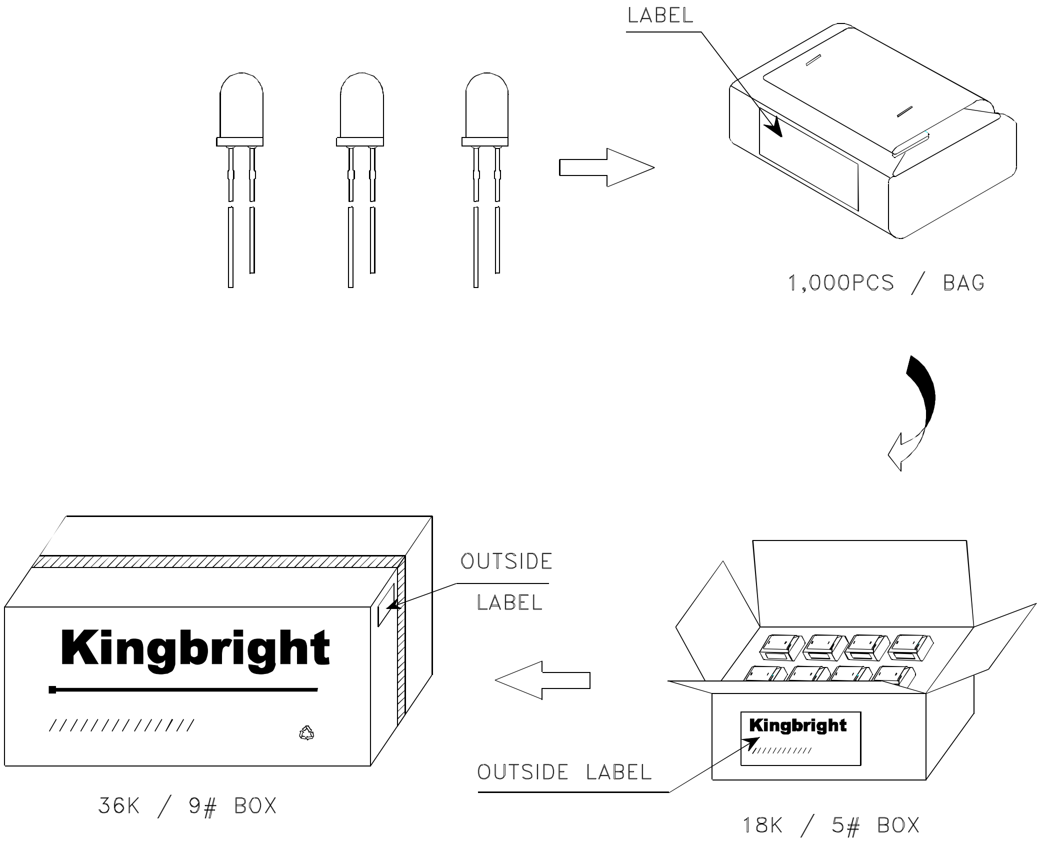


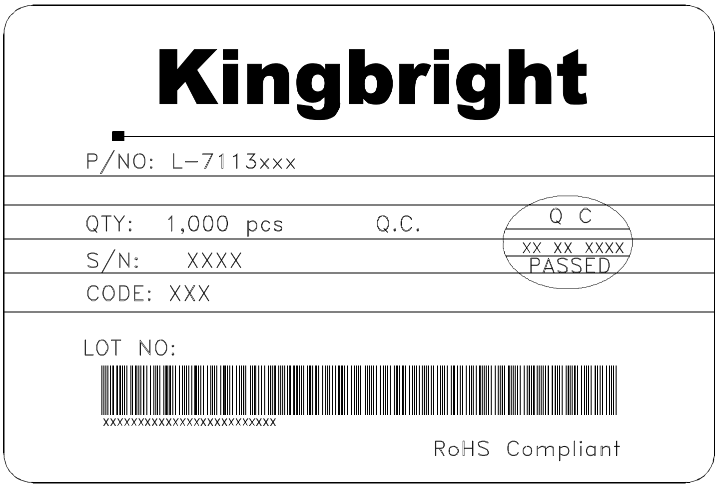
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

PACKING & LABEL SPECIFICATIONS L-7113SGD-14V





Kingbright

P/NO: L-7113xxx

QTY: 1,000 pcs Q.C.

S/N: XXXX

CODE: XXX

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxxxxx

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)

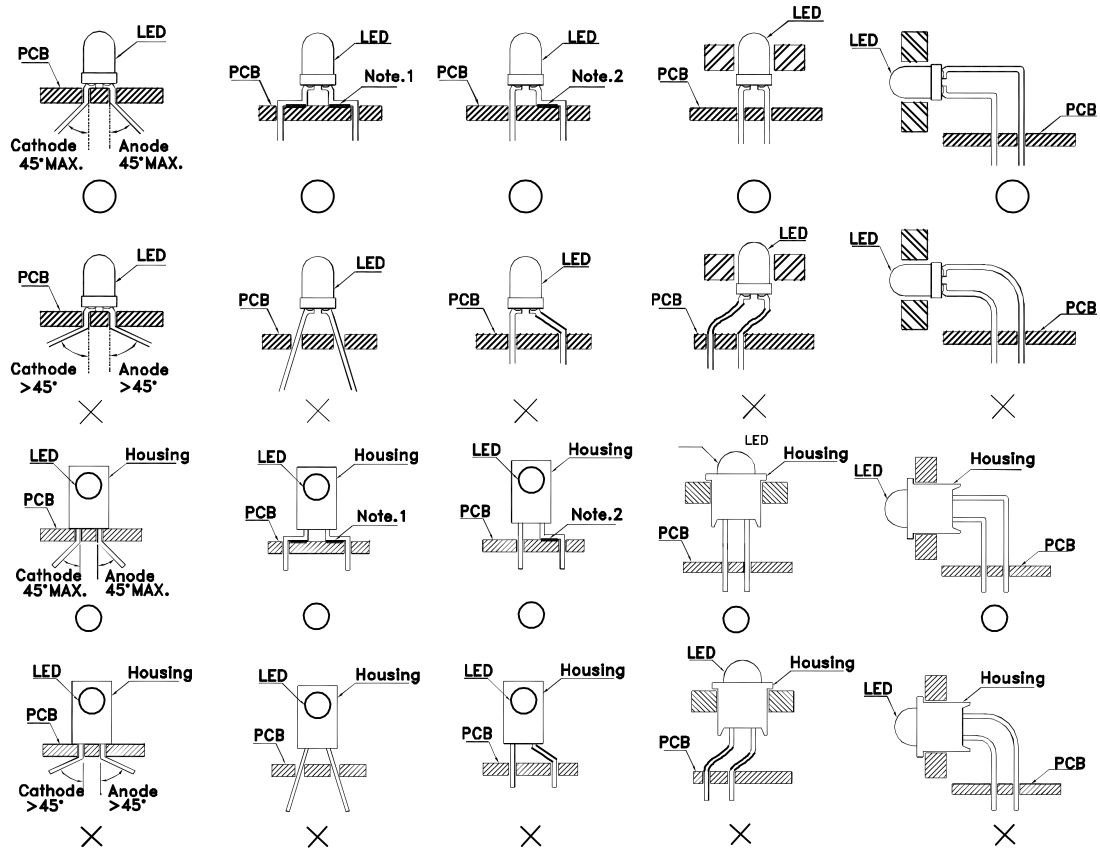


Fig.1

"○" Correct mounting method "×" 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.

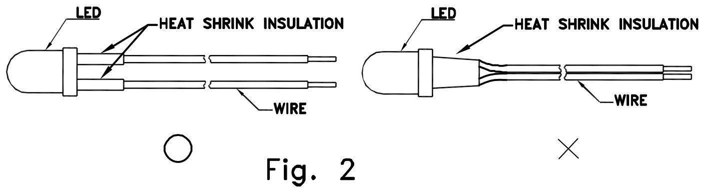


Fig. 2

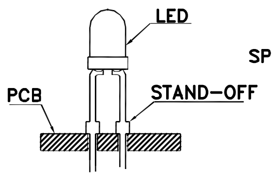


Fig. 3

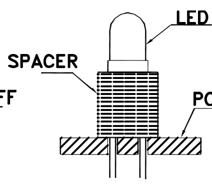


Fig. 4

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)

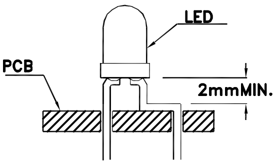


Fig. 5

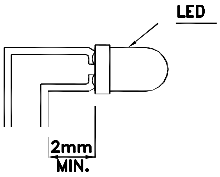


Fig. 6

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.

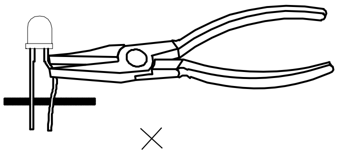


Fig. 7

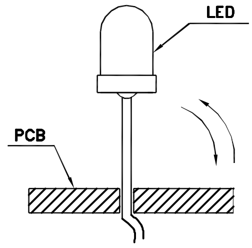


Fig. 8

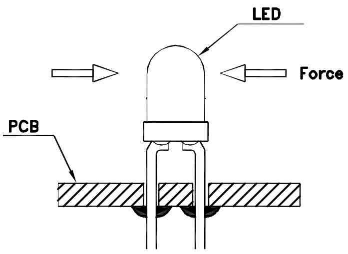


Fig. 9

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