Part Number: L-7679C1QBC-D

Technical Data

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Description
Static electricity and surge damage the LEDS. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
All devices, equipment and machinery must be electrically grounded.

Features:

*High luminance output.
*Design for high current operation.
*Uniform color.
*Low power consumption.
*Low thermal resistance.
*Low profile.
*Packaged in tubes for use with automatic insertion equipment.
*Soldering methods: wave soldering.
*RoHS Compliant.

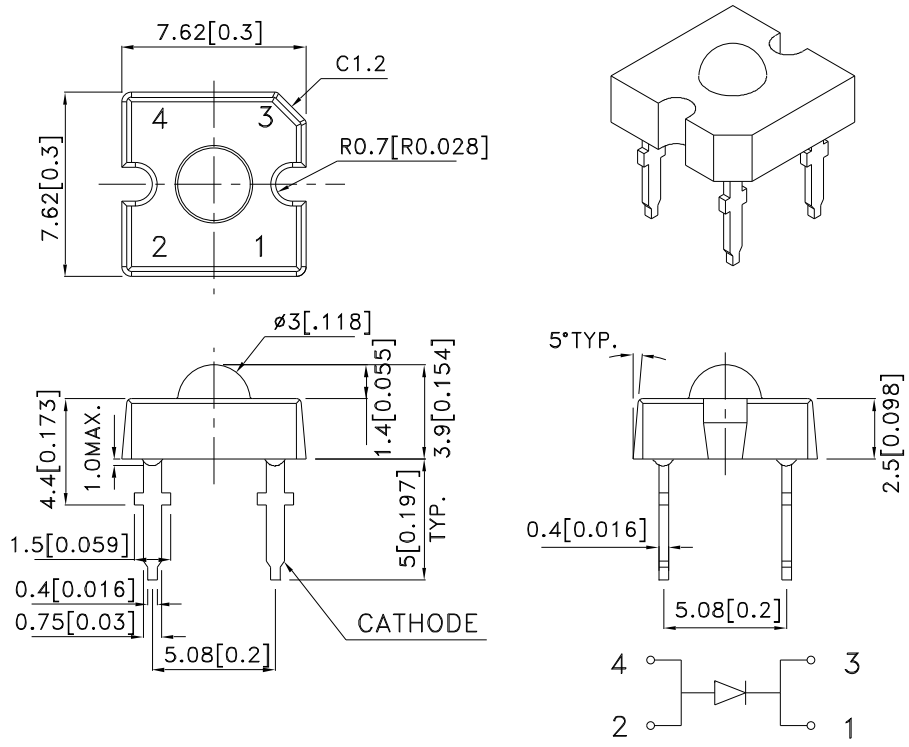
Benefits:

*Outstanding Material Efficiency.
*Electricity savings.
*Maintenance savings.
*Reliable and Rugged.

Typical Applications:

*Automotive Exterior Lighting.
*Electronic Signs and Signals.
*Specialty Lighting.

Outline Drawings



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.

Absolute Maximum Ratings at TA=25°C

PARAMETER	QB-D	UNITS
DC Forward Current	30	mA
Power dissipation	126	mW
Reverse Voltage	5	V
Operating Temperature	-40 To +85	°C
Storage Temperature	-55 To +85	°C
Lead Solder Temperature[1]	260°C For 5 Seconds	

1.1.5mm[0.06inch]below seating plane.
NO Reflow soldering .

Selection Guide

Part No.	LED COLOR	Iv(cd)[1] @30mA Min.	Iv(cd)[1] @30mA Typ.	Φv(lm)[1] @30mA Typ.	Viewing Angle[2] 2θ1/2 Typ.
L-7679C1QBC-D	Blue (InGaN)	0.4	0.8	0.8	70°

Notes:
1.Luminous intensity is measured with an integrating sphere after the device has stabilized; Luminous Intensity / luminous flux: +/-15%.
2.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

Optical Characteristics at TA=25°C
I_F=30mA Rθj-a=200°C/W

DEVICE TYPE	PEAK WAVELENGTH λPEAK (nm) TYP.	DOMINANT[1] WAVELENGTH λDOM (nm) TYP.	SPECTRAL LINE WAVELENGTH Δλ1/2(nm) TYP.
QB-D	468	470	25

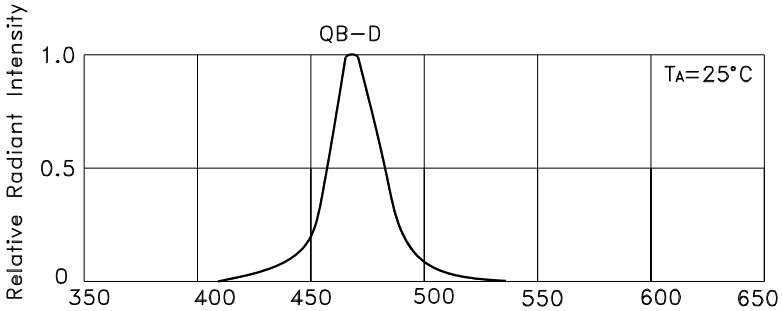
Note:
1.The dominant wavelength is derived from the CIE Chromaticity Diagram and represents the perceived color of the device; Wavelength: +/-1nm.

Electrical Characteristics at TA=25°C

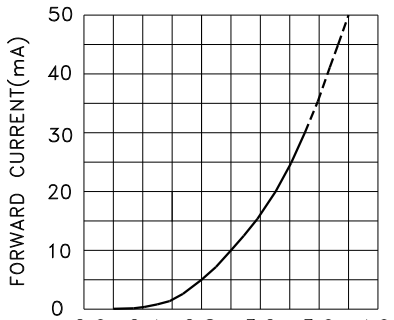
DEVICE TYPE	FORWARD VOLTAGE [1] V_F (VOLTS) @ I_F=30mA TYP.	FORWARD VOLTAGE [1] V_F (VOLTS) @ I_F=30mA MAX.	REVERSE CURRENT I_R (uA) @ V_R=5V MAX.	CAPACITANCE C (pF) @ V_F=0V F=1MHZ TYP.	THERMAL RESISTANCE Rθj -pin °C/W TYP.
QB-D	3.5	4.2	50	100	180

Note:
1. Forward Voltage: +/-0.1V.

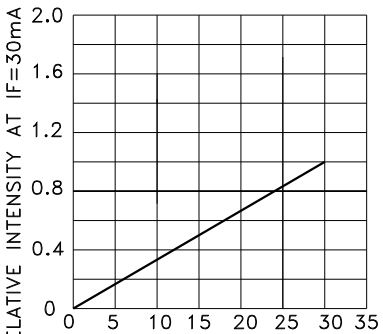
Figures



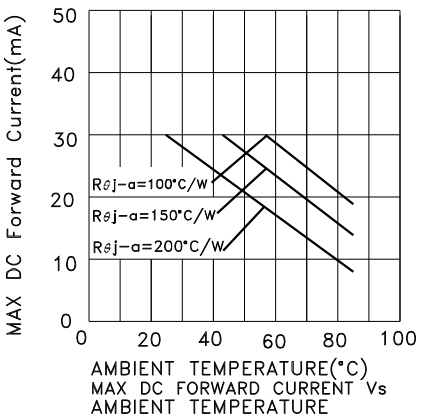
RELATIVE INTENSITY Vs. WAVELENGTH



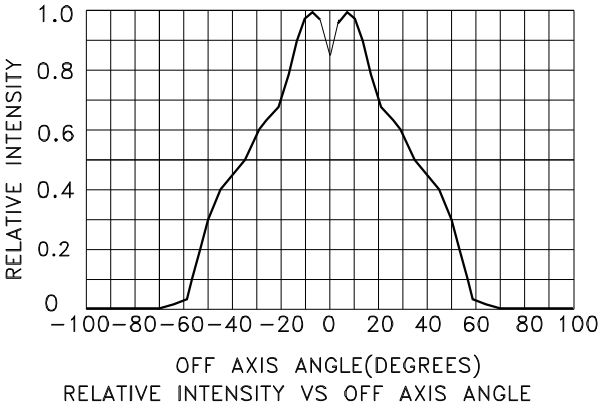
FORWARD CURRENT Vs.
FORWARD VOLTAGE



RELATIVE INTENSITY Vs.
FORWARD CURRENT

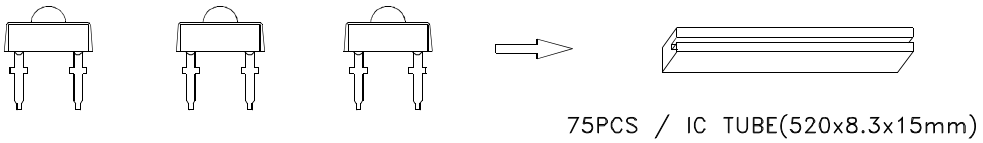


MAX DC FORWARD CURRENT Vs
AMBIENT TEMPERATURE

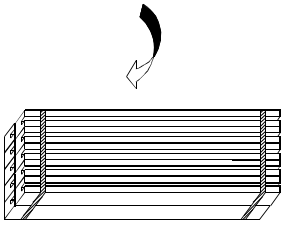


RELATIVE INTENSITY VS OFF AXIS ANGLE

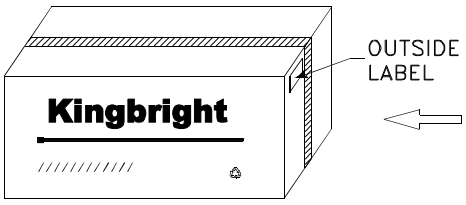
PACKING & LABEL SPECIFICATIONS **L-7679C1QBC-D**



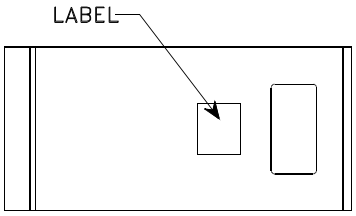
75PCS / IC TUBE(520x8.3x15mm)



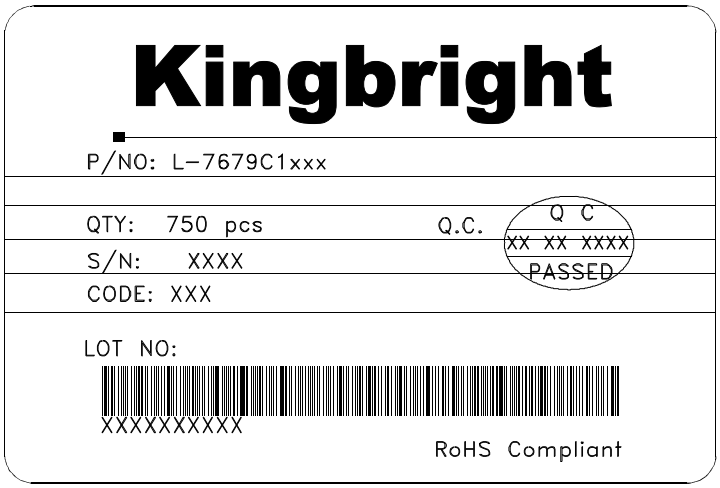
750pcs / 10pcs IC TUBE



7.5K / 6# BOX



10pcs IC TUBE / BAG



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)

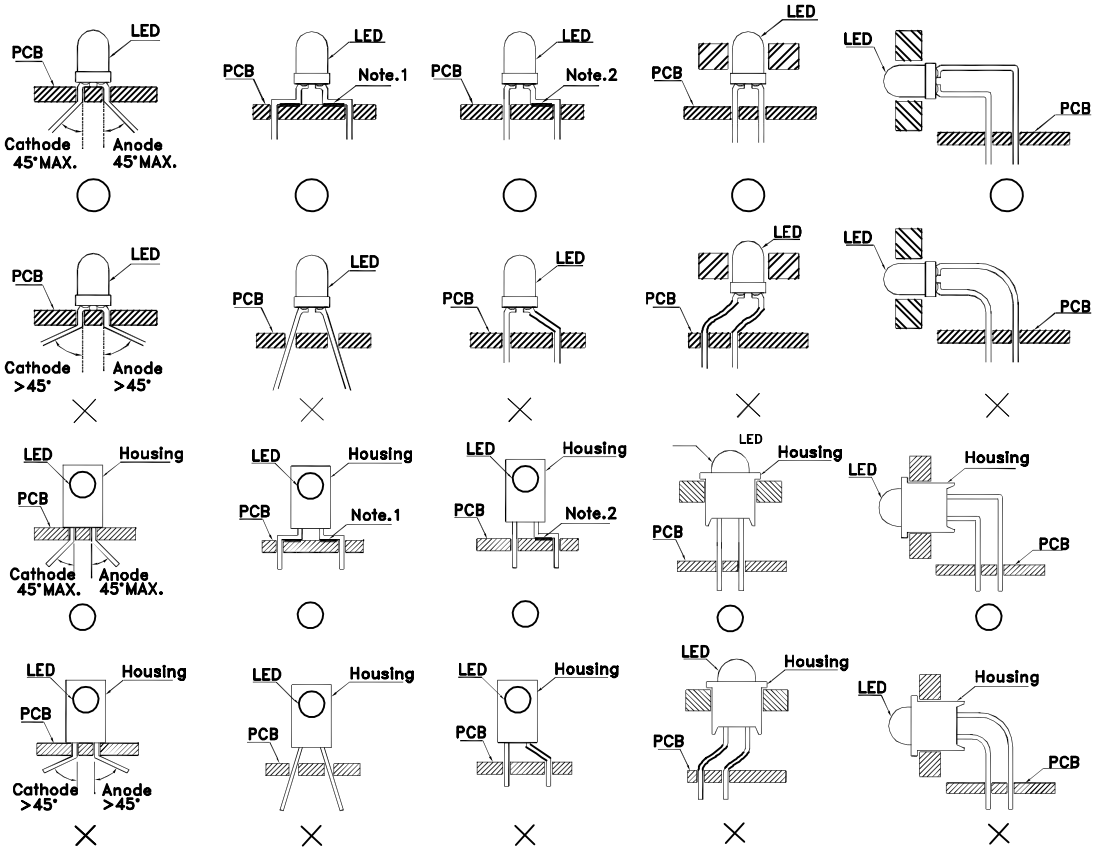


Fig.1

"○" 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.

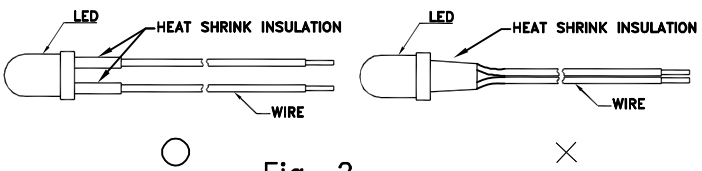


Fig. 2

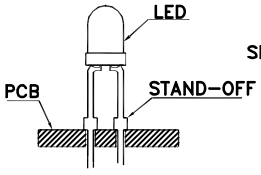


Fig. 3

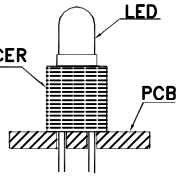


Fig. 4

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)

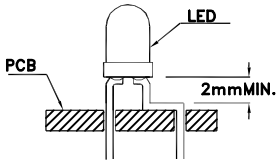


Fig. 5

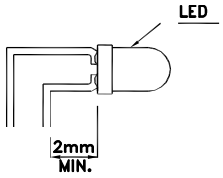


Fig. 6

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.

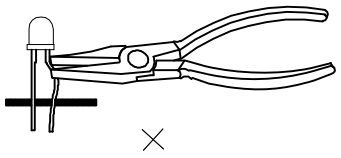


Fig. 7

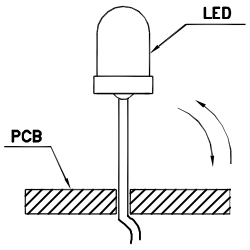


Fig. 8

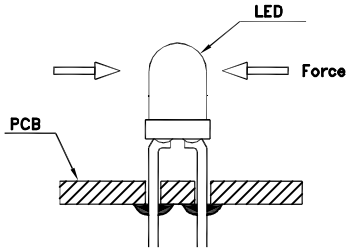


Fig. 9

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