

Part Number: L-1387QMP/1CGKQBDW



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Green
Blue

Features

- Surface mount type.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability life measured in years.
- Package: 1000pcs / reel.
- Housing material: PPA.
- High temperature resistant housing.
- High glass transition temperature epoxy.
- RoHS compliant.

Description

The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

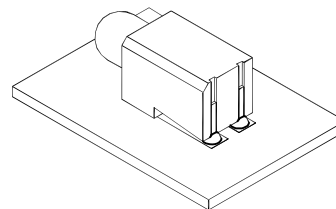
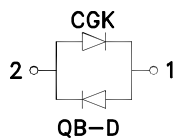
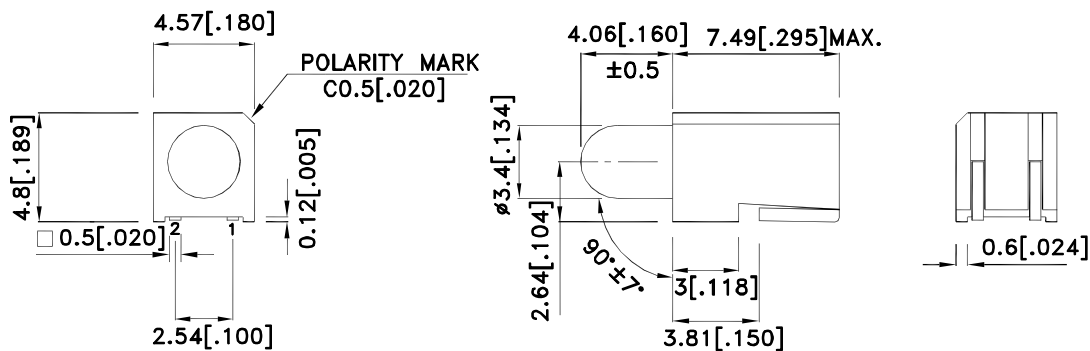
The Blue source color devices are made with InGaN Light Emitting Diode.

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.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (0.01") unless otherwise noted.
3. 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-1387QMP/1CGKQBDW | Green (AlGaInP) | WHITE DIFFUSED | 50 | 120 | 60° |
| | Blue (InGaN) | | 50 | 130 | |

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 _{peak} | Peak Wavelength | Green Blue | 574 468 | | nm | I _F =20mA |
| λ _D [1] | Dominant Wavelength | Green Blue | 570 470 | | nm | I _F =20mA |
| Δλ _{1/2} | Spectral Line Half-width | Green Blue | 20 25 | | nm | I _F =20mA |
| C | Capacitance | Green Blue | 15 100 | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Green Blue | 2.1 3.3 | 2.5 4 | V | I _F =20mA |

Notes:

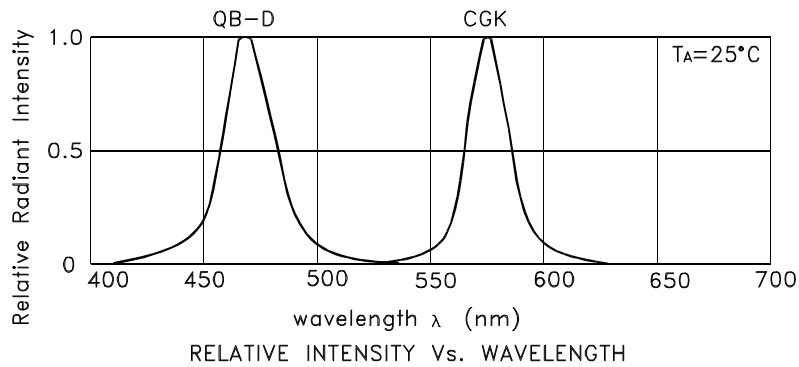
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

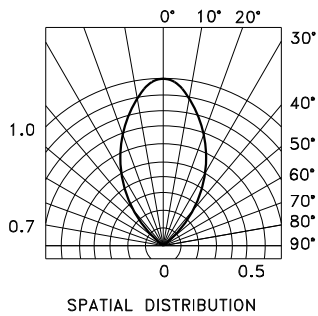
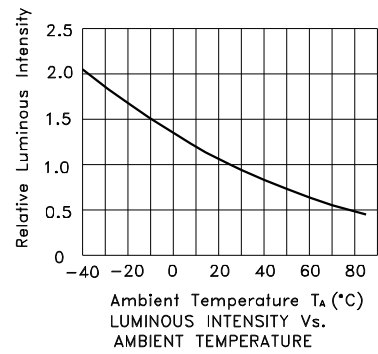
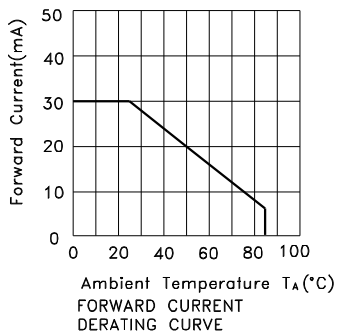
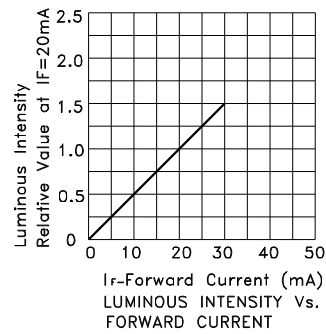
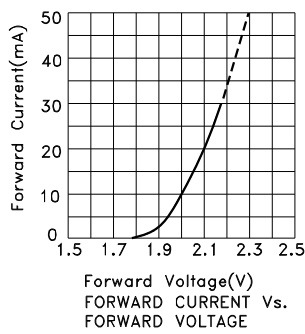
| Parameter | Green | Blue | Units |
|--------------------------|----------------|------|-------|
| Power dissipation | 75 | 120 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 150 | 150 | mA |
| Operating Temperature | -40°C To +85°C | | |
| Storage Temperature | -40°C To +85°C | | |

Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.

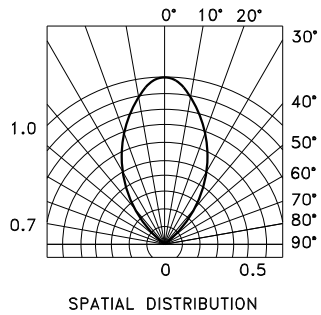
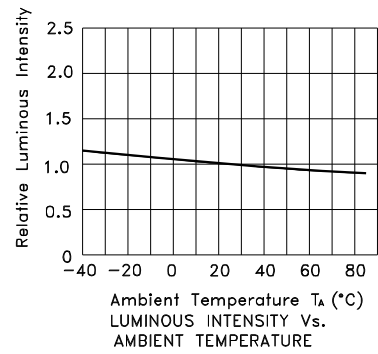
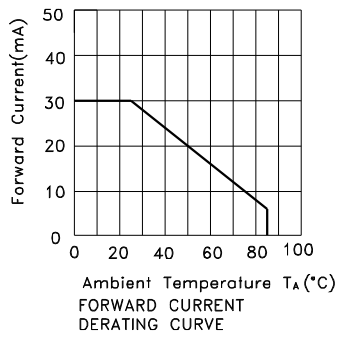
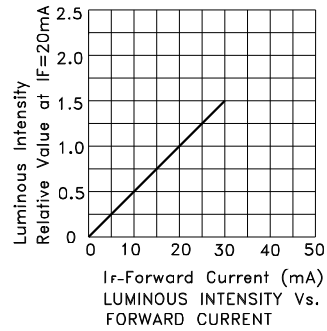
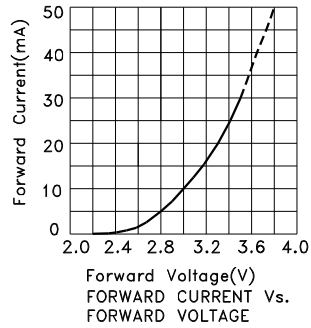


L-1387QMP/1CGKQBDW Green



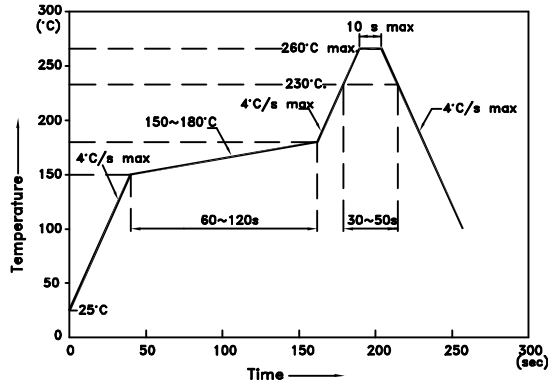
Kingbright

Blue



L-1387QMP/1CGKQBDW

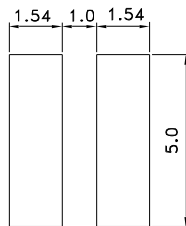
Reflow Soldering Profile For Lead-free SMT Process.



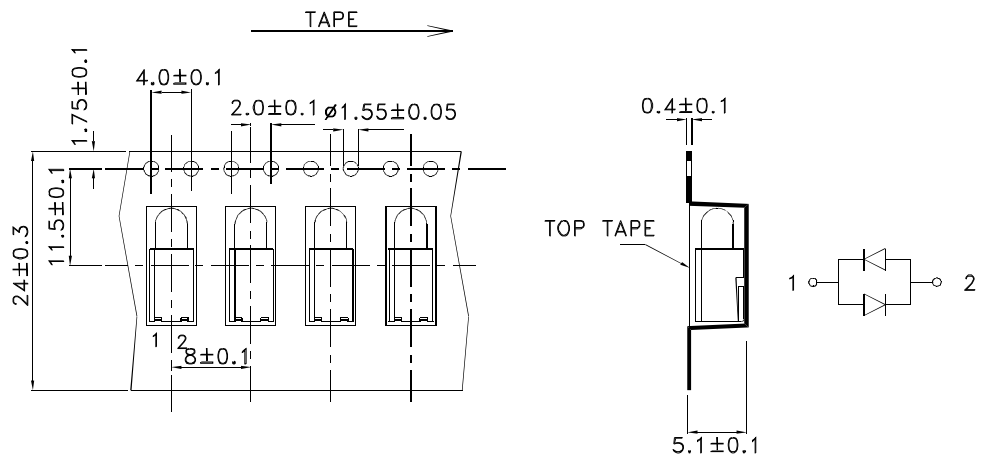
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. No more than once.

Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.1)

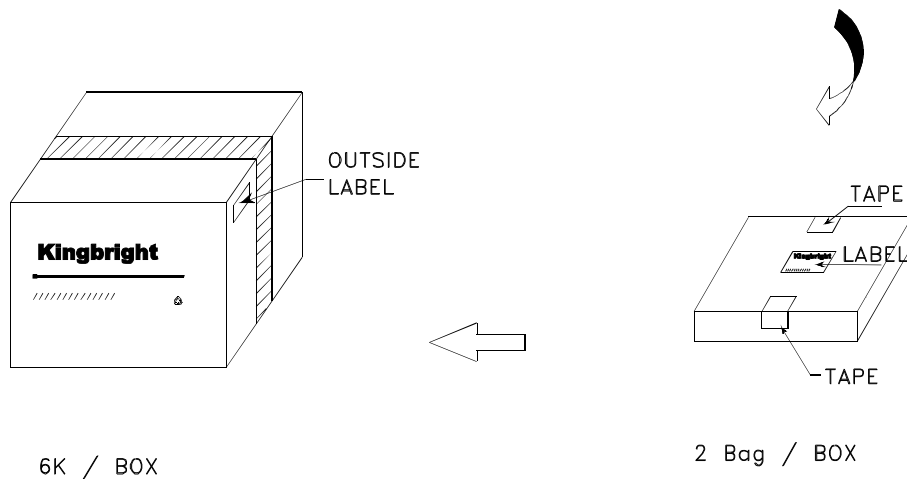
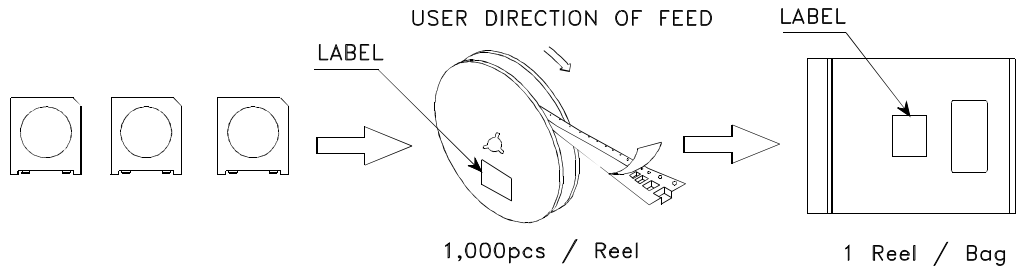



Tape Dimensions
(Units : mm)



PACKING & LABEL SPECIFICATIONS

L-1387QMP/1CGKQBDW



| | |
|--|--|
| <h1>Kingbright</h1> | |
| P/NO: L-1387QMPxxx | |
| QTY: 1000 pcs | Q.C. Q C XX XX XX PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | |
| RoHS Compliant | |