

# Kingbright®

## T-1 (3mm) BLUE LED

L-934MBD GaN  
L-934MBT GaN  
L-934MBC GaN

### Features

- LOW POWER CONSUMPTION.
- SOLID STATE BLUE LIGHT SOURCE.
- SUITABLE FOR FULL COLOR LED DISPLAYS AND INDICATORS DIAGNOSTIC/ANALYTICAL EQUIPMENT.

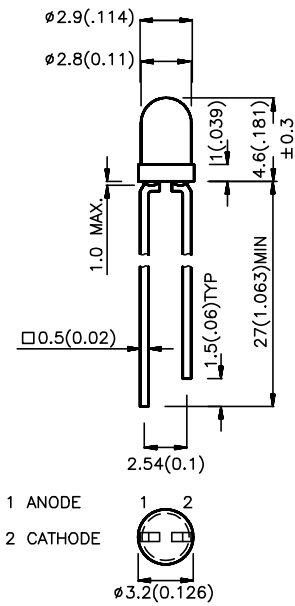
### Description

The blue source color devices are made with GaN on SiC 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  $\pm 0.25(0.01)$  unless otherwise noted.
  3. Lead spacing is measured where the lead emerge package.
  4. Specifications are subjected to change without notice.

### Selection Guide

| Part No. | Dice       | Case-Color       | Iv (mcd) @ 20 mA |      | Viewing Angle |
|----------|------------|------------------|------------------|------|---------------|
|          |            |                  | Min.             | Max. |               |
| L-934MBD | Blue (GaN) | BLUE DIFFUSED    | 12.5             | 40   | 60°           |
| L-934MBT | Blue (GaN) | BLUE TRANSPARENT | 20               | 60   | 20°           |
| L-934MBC | Blue (GaN) | WATER CLEAR      | 20               | 90   | 20°           |

Note:  
1.  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

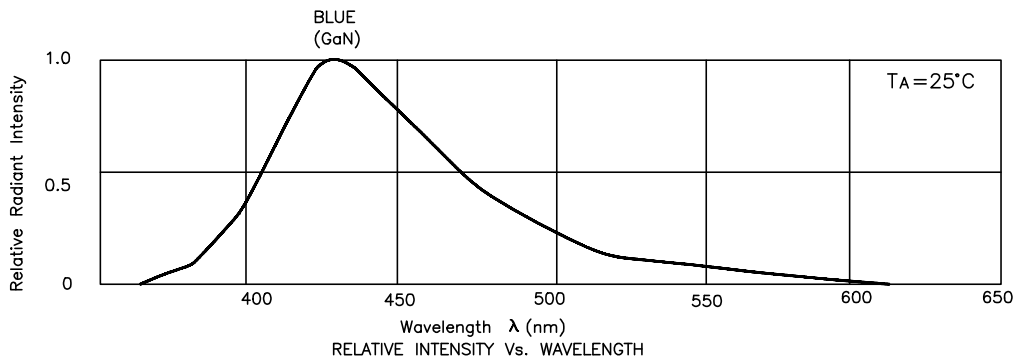
### Electrical / Optical Characteristics at T<sub>A</sub>=25°C

| Symbol                  | Parameter               | Device     | Typ. | Max. | Units | Test Conditions |
|-------------------------|-------------------------|------------|------|------|-------|-----------------|
| $\lambda_{\text{peak}}$ | Peak Wavelength         | Blue (GaN) | 430  |      | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$   | Spectral Line Halfwidth |            | 65   |      | nm    | IF=20mA         |
| C                       | Capacitance             |            | 100  |      | pF    | VF=0V;f=1MHz    |
| V <sub>F</sub>          | Forward Voltage         |            | 4.5  | 5.5  | V     | IF=20mA         |
| I <sub>R</sub>          | Reverse Current         |            | 10   |      | uA    | VR = 5V         |

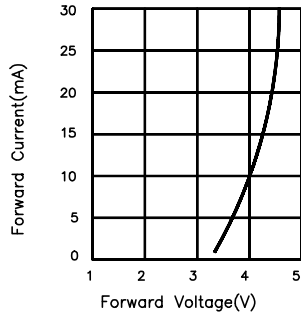
### Absolute Maximum Ratings at T<sub>A</sub>=25°C

| Parameter                     | Blue                 | Units |
|-------------------------------|----------------------|-------|
| Power dissipation             | 105                  | mW    |
| DC Forward Current            | 30                   | mA    |
| Peak Forward Current [1]      | 200                  | mA    |
| Reverse Voltage               | 5                    | V     |
| Operation/Storage Temperature | -40 °C To +85 °C     |       |
| Lead Solder Temperature [2]   | 260 °C For 5 Seconds |       |

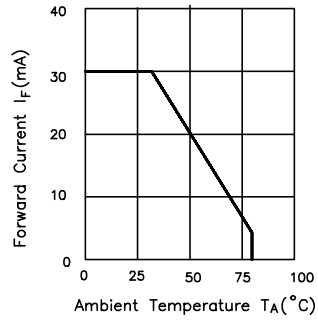
Notes:  
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
 2. 4mm below package base.



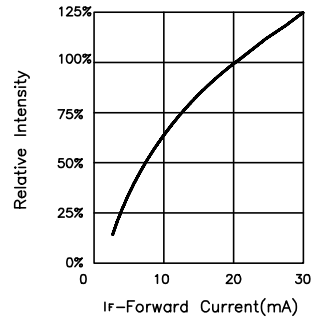
Blue L-934MBD,L-934MBT,L-934MBC



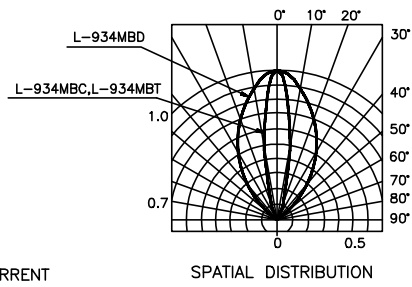
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



RELATIVE INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION