

# Kingbright®

## T-1(3mm) SUPER BRIGHT LED LAMPS

L-934SG SUPER BRIGHT GREEN

L-934SR SUPER BRIGHT RED

### Features

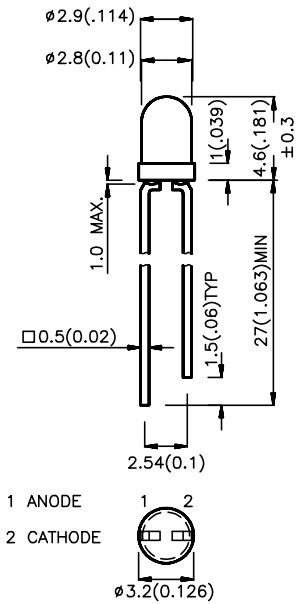
- ULTRA BRIGHTNESS.
- BOTH DIFFUSED AND WATER CLEAR LENS ARE AVAILABLE.
- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.

### Description

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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 lead emerge package.
  4. Specifications are subjected to change without notice.

### Selection Guide

| Part No.   | Dice                      | Lens Type      | Iv (mcd)<br>@ 20 mA |      | Viewing<br>Angle<br>2 $\theta$ 1/2 |
|------------|---------------------------|----------------|---------------------|------|------------------------------------|
|            |                           |                | Min.                | Max. |                                    |
| L-934SGC   | SUPER BRIGHT GREEN (GaP)  | WATER CLEAR    | 100                 | 300  | 50°                                |
| L-934SRC-B | SUPER BRIGHT RED (GaAlAs) | WATER CLEAR    | 250                 | 360  |                                    |
| L-934SRC-C |                           |                | 360                 | 500  |                                    |
| L-934SRC-D |                           |                | 500                 | 700  |                                    |
| L-934SRC-E |                           |                | 700                 | 1000 |                                    |
| L-934SRC-F |                           |                | 1000                | 1200 |                                    |
| L-934SRC-G |                           |                | 1200                | 1400 |                                    |
| L-934SRC-H |                           |                | 1400                | 1800 |                                    |
| L-934SRC-J |                           |                | 1800                | 2500 |                                    |
| L-934SGD   | SUPER BRIGHT GREEN (GaP)  | GREEN DIFFUSED | 40                  | 60   | 60°                                |
| L-934SRD-B | SUPER BRIGHT RED (GaAlAs) | RED DIFFUSED   | 70                  | 90   |                                    |
| L-934SRD-C |                           |                | 90                  | 100  |                                    |
| L-934SRD-D |                           |                | 100                 | 200  |                                    |
| L-934SRD-E |                           |                | 200                 | 300  |                                    |
| L-934SRD-F |                           |                | 300                 | 400  |                                    |
| L-934SRD-G |                           |                | 400                 | 600  |                                    |
| L-934SRD-H |                           |                | 600                 | 1000 |                                    |
| L-934SRD-J |                           |                | 1000                | 1300 |                                    |

- Note:
1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

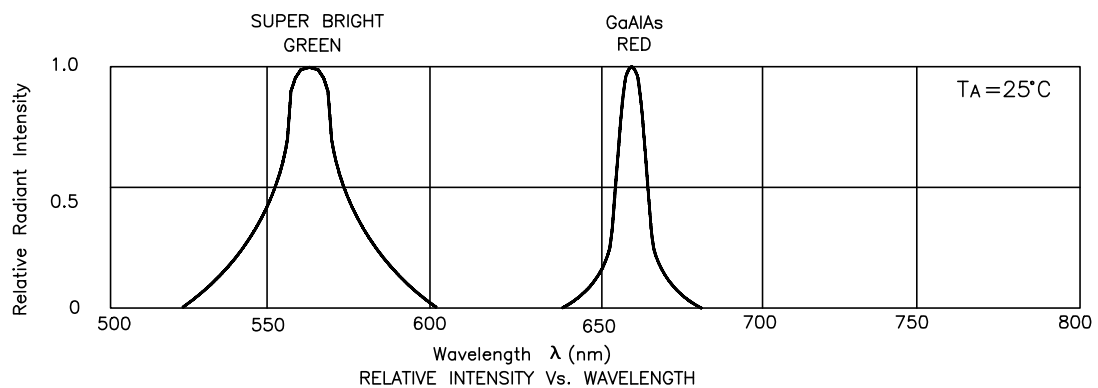
### Electrical / Optical Characteristics at T<sub>A</sub>=25°C

| Symbol                  | Parameter               | Device                                 | Typ.        | Max.       | Units | Test Conditions |
|-------------------------|-------------------------|----------------------------------------|-------------|------------|-------|-----------------|
| $\lambda_{\text{peak}}$ | Peak Wavelength         | Super Bright Green<br>Super Bright Red | 565<br>660  |            | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$   | Spectral Line Halfwidth | Super Bright Green<br>Super Bright Red | 30<br>20    |            | nm    | IF=20mA         |
| C                       | Capacitance             | Super Bright Green<br>Super Bright Red | 45<br>95    |            | pF    | VF=0V;f=1MHz    |
| V <sub>F</sub>          | Forward Voltage         | Super Bright Green<br>Super Bright Red | 2.2<br>1.85 | 2.5<br>2.5 | V     | IF=20mA         |
| I <sub>R</sub>          | Reverse Current         | All                                    | 10          |            | uA    | VR = 5V         |

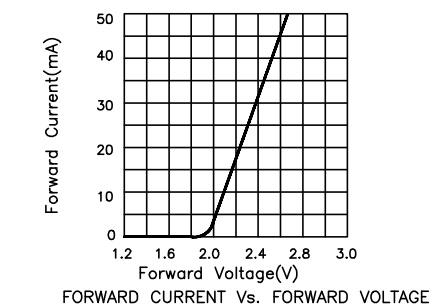
### Absolute Maximum Ratings at T<sub>A</sub>=25°C

| Parameter                      | Super Bright Green  | Super Bright Red | Units |
|--------------------------------|---------------------|------------------|-------|
| Power dissipation              | 105                 | 100              | mW    |
| DC Forward Current             | 25                  | 30               | mA    |
| Peak Forward Current [1]       | 150                 | 150              | mA    |
| Reverse Voltage                | 5                   | 5                | V     |
| Operating/Storage Temperature  | -40°C To +85°C      |                  |       |
| Lead Soldering Temperature [2] | 260°C For 5 Seconds |                  |       |

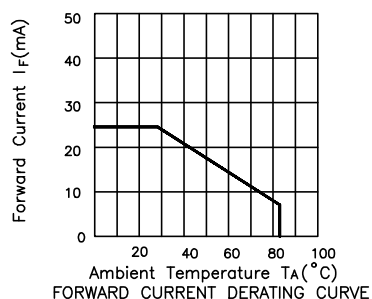
Notes:  
1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
2. 4mm below package base.



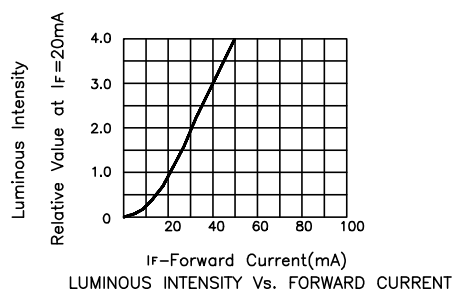
## Super Bright Green L-934SGC / L-934SGD



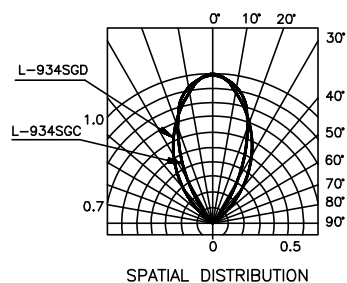
FORWARD CURRENT Vs. FORWARD VOLTAGE



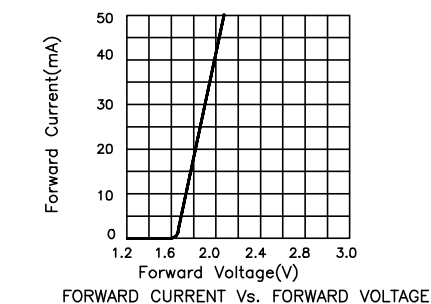
FORWARD CURRENT DERATING CURVE



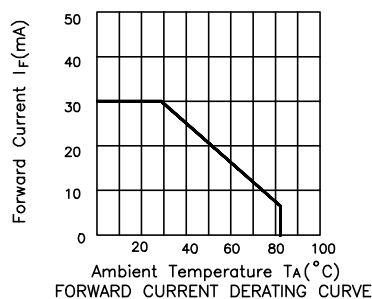
LUMINOUS INTENSITY Vs. FORWARD CURRENT



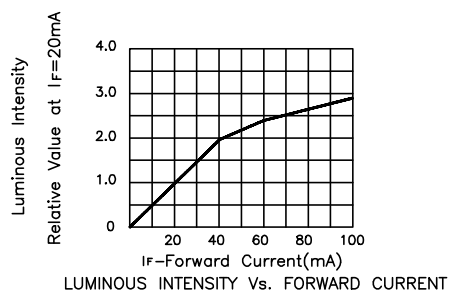
## Super Bright Red L-934SRC / L-934SRD



FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

