

# Kingbright

## 4mm CYLINDRICAL LED LAMP

WP1413SGDL

SUPER BRIGHT GREEN

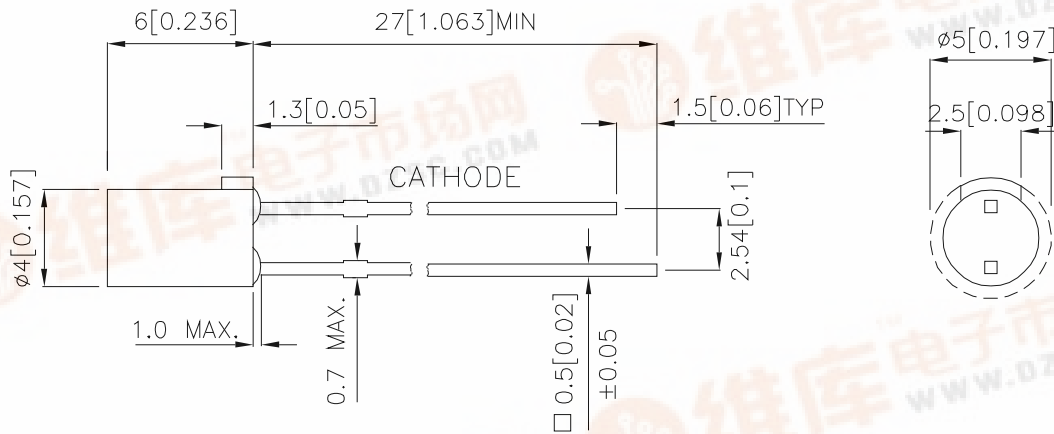
### Features

- CYLINDRICAL TYPE, FLAT TOP.
- CONVEX CATHODE MARK ON BODY.
- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- 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  $\pm 0.25 (0.01")$  unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No.   | Dice                     | Lens Type      | Iv (mcd)<br>@ 20mA |      | Viewing<br>Angle |
|------------|--------------------------|----------------|--------------------|------|------------------|
|            |                          |                | Min.               | Typ. | 2 $\theta$ 1/2   |
| WP1413SGDL | SUPER BRIGHT GREEN (GaP) | GREEN DIFFUSED | 2.6                | 10   | 100°             |

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 TA=25°C

| Symbol                | Parameter                | Device             | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|--------------------|------|------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Green | 565  |      | nm    | IF=20mA         |
| $\lambda_D$           | Dominant Wavelength      | Super Bright Green | 568  |      | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Green | 30   |      | nm    | IF=20mA         |
| C                     | Capacitance              | Super Bright Green | 15   |      | pF    | VF=0V;f=1MHz    |
| VF                    | Forward Voltage          | Super Bright Green | 2.2  | 2.5  | V     | IF=20mA         |
| IR                    | Reverse Current          | Super Bright Green |      | 10   | uA    | VR = 5V         |

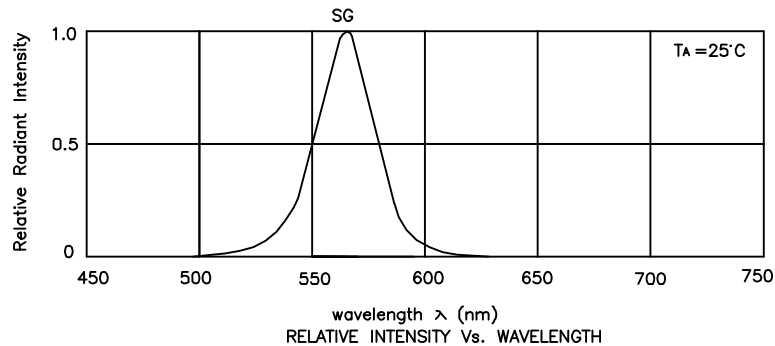
## Absolute Maximum Ratings at TA=25°C

| Parameter                     | Super Bright Green  | Units |
|-------------------------------|---------------------|-------|
| Power dissipation             | 105                 | mW    |
| DC Forward Current            | 25                  | mA    |
| Peak Forward Current [1]      | 140                 | mA    |
| Reverse Voltage               | 5                   | V     |
| Operating/Storage Temperature | -40°C To +85°C      |       |
| Lead Solder Temperature [2]   | 260°C For 3 Seconds |       |
| Lead Solder Temperature [3]   | 260°C For 5 Seconds |       |

Notes:

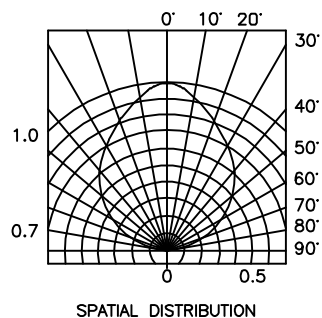
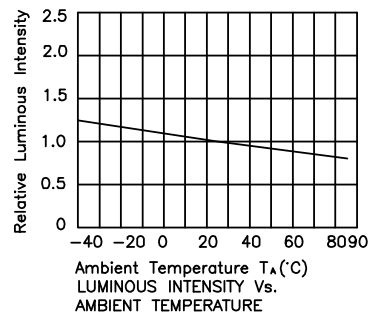
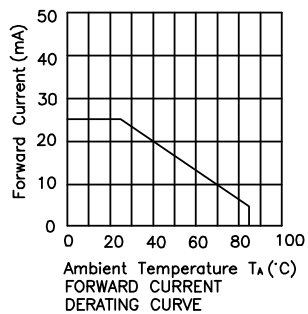
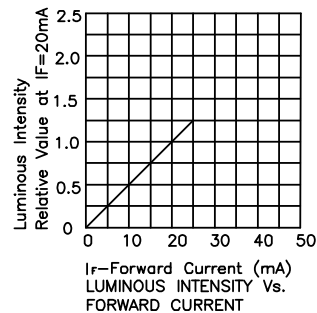
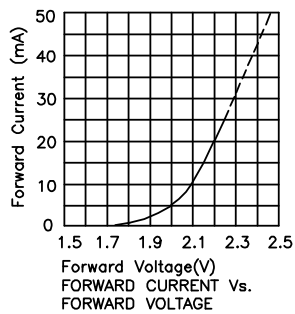
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

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## Super Bright Green

## WP1413SGDL



### Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.