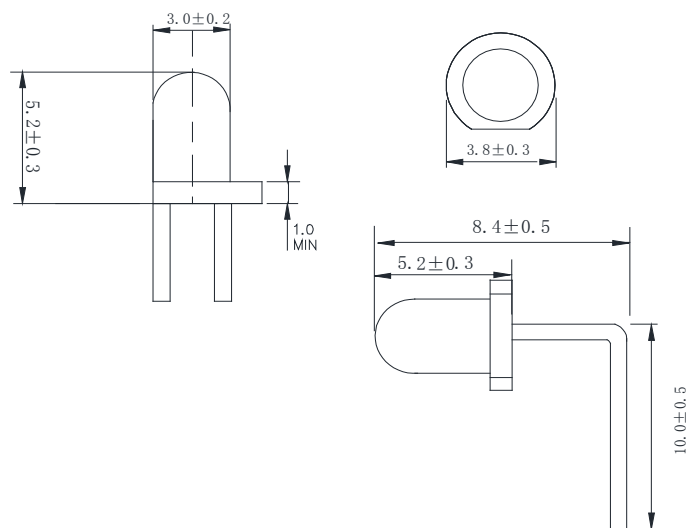


Features

- 3mm DIA LED Lamp
- Low Power Consumption
- High Efficiency
- Various Colors and Viewing Angle
- Long Solid State Reliability
- Package: 1000pcs/Packing

Applications

- Indicator

Package Dimensions**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm(.01") unless otherwise noted.
3. Protruded Resin under flange is 1.0mm(0.04") max.
4. Specifications are subject to change without notice.

**Selection Guide**

| Part No | Lens Type | Dice | Emitted Color |
|-------------------------|----------------|-------|---------------|
| FDL-3521G-TGDYH-D8.4-10 | Green Diffused | GaAsP | Green |

Electrical / Optical Characteristics At Ta=25 °C

| Symbol | Parameter | Min. | Typ. | Max. | Unit | Test Condition |
|--------|--------------------------|------|------|------|------|----------------|
| Iv | Luminous Intensity | | 20.0 | | mcd | IF=20mA |
| 2θ1/2 | Viewing Angle | | 30 | | deg | IF=20mA |
| λ Peak | Peak Emission Wavelength | | 574 | | nm | IF=20mA |
| λ d | Dominant Wavelength | | 571 | | nm | IF=20mA |
| Δλ | Spectral Line Half-Width | | 20 | | nm | IF=20mA |
| VF | Forward Voltage | | 2.1 | 2.5 | V | IF=20mA |
| IR | Reverse Current | | 10 | | uA | VR 5V |

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 optical centerline value

Absolute Maximum Ratings At Ta=25°C

| Parameter | Green | Unit |
|-----------------------------|---------------------|------|
| Power Dissipation | 80 | mW |
| Peak Forward Current[1] | 150 | mA |
| Continuous Forward Current | 25 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature Range | -40°C to + 85°C | |
| Storage Temperature Range | -40°C to + 85°C | |
| Soldering Condition | 260°C For 5 Seconds | |

Note:

1. 1/10DutyCycle, 0.1msPulseWidth

Electrical Optical Characteristics Curves At Ta=25 °C

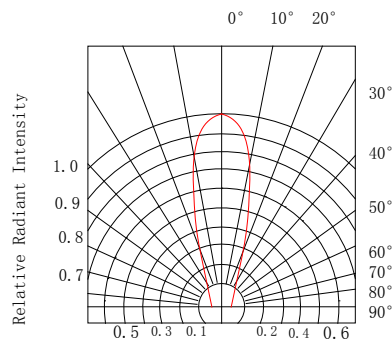
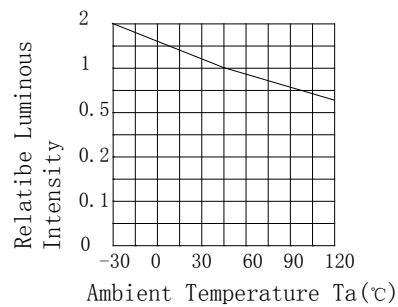
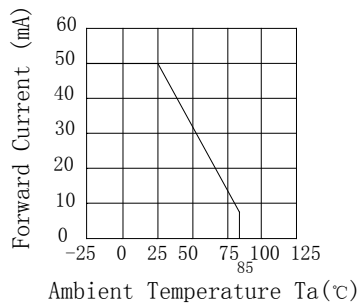
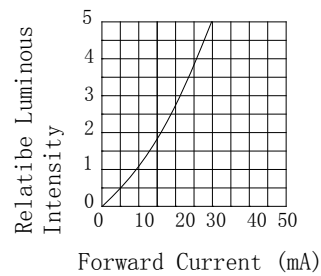
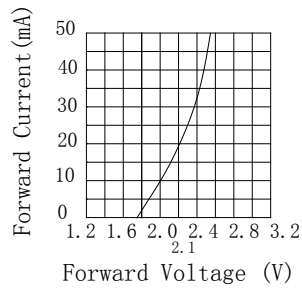
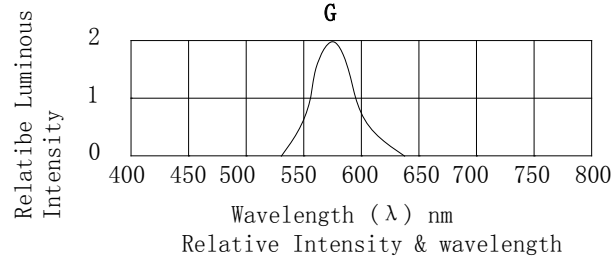


Fig. 6 Radiation Diagram

Notes:

1. The LEDs should be used within a year.
2. The LEDs should be kept in 5~30°C and 60% RH for less.
3. The LEDs should be used within 24 hours, or else should be kept a 5~30°C and 30% RH or less. And LEDs should be used within 7 days after opening the package.

Reliability Test Items Conditions

| Classification | Test Item | Test Conditions | Test hours | Result |
|--------------------|-----------------------------------|---|------------|--------|
| Endurance Test | Operation Life | Connect with a power if=20mA Ta=Under room temperature | 1000Hrs | 0/20 |
| | High Temperature High Humidity | Ta=+65°C±5°C RH=90%-95% | 240Hrs | 0/20 |
| | High Temperature Storage | High Ta=+85°C±5°C | 1000Hrs | 0/20 |
| | Low Temperature Storage | Low Ta=-35°C±5°C Test time=1000hrs | 1000Hrs | 0/20 |
| Environmental Test | Temperature Cycling | -45°C ~+105°C 15min 5min 15min | 300 Cycles | 0/20 |
| | Thermal Shock | -35°C ~±5°C ~+85°C ~±5°C 5min 10sec 5min | 300 Cycles | 0/20 |
| | Solder Resistance | Preheating: 120°C-150°C,within 2 minutes. Operation heating : 260°C (Max.),within5 seconds(Max.) | 5Cycles | 0/20 |

Judgment criteria of failure for the reliability

| Measuring items | Symbol | Measuring conditions | Judgment criteria for failure |
|--------------------|----------------------|----------------------|-------------------------------|
| Forward voltage | V _F (V) | I _F =20mA | Over U×1.2 |
| Reverse current | I _R (μA) | V _R =5V | Over U×2 |
| Luminous intensity | I _v (mcd) | I _F =20mA | Below S×0.5 |

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Measurment shall be taken between 2 hours after the test pieces have been returned to normal ambient conditions after completion of each test.