

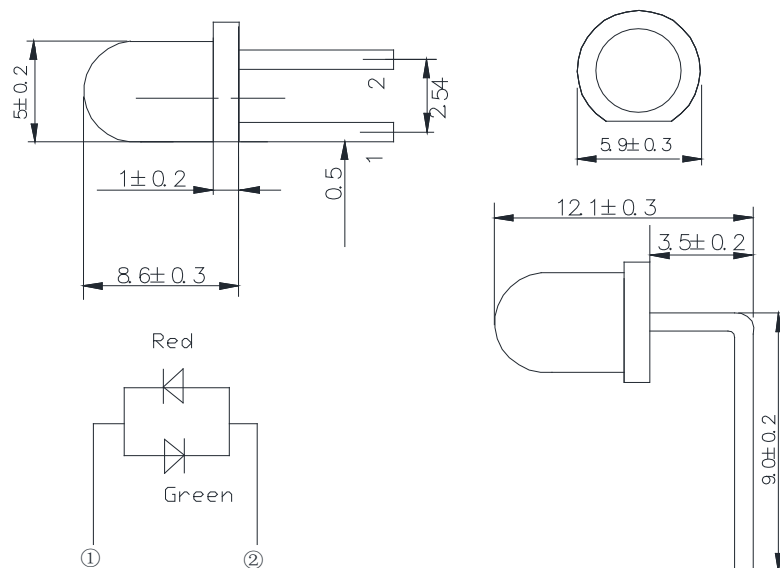
Features

- 5mm DIA LED Lamp
- Low Power Consumption
- High Efficiency
- Various Colors and Viewing Angle
- Long Solid State Reliability

Applications

- Indicator

Package Dimensions



Notes:

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



Selection Guide

Part No	Lens Type	Dice	Emitted Color
FDL-5862SGR-ZWCHQ-1G-D3.5-9	Water Clear	GaAsP	Super Red Green

Electrical / Optical Characteristics At Ta=25 °C

Symbol	Parameter		Super Red	Green	Unit	Test Condition
Iv	Luminous Intensity	MIN.	50.0	40.0	mcd	IF=20mA
		TYP.	100.0	60.0		
2θ1/2	Viewing Angle	TYP.	30	30	deg	IF=20mA
λ Peak	Peak Emission Wavelength	TYP.	631	574	nm	IF=20mA
λ d	Dominant Wavelength	TYP.	625	571	nm	IF=20mA
△λ	Spectral Line Half-Width	TYP.	20	20	nm	IF=20mA
VF	Forward Voltage	TYP.	2.0	2.1	V	IF=20mA
		MAX.	2.5	2.4		
IR	Reverse Current	MAX.	50	50	μ A	VR 5V

Note:

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

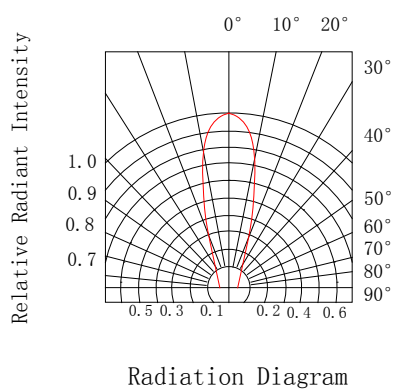
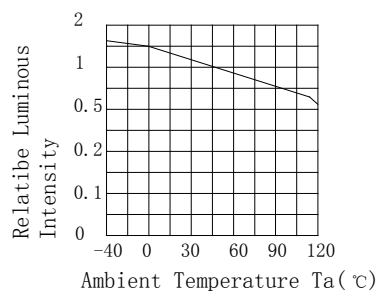
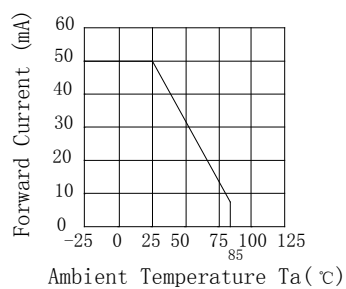
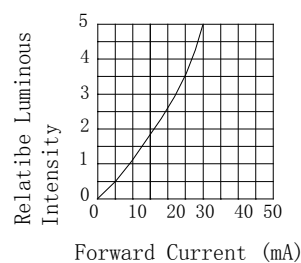
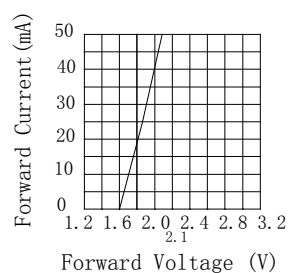
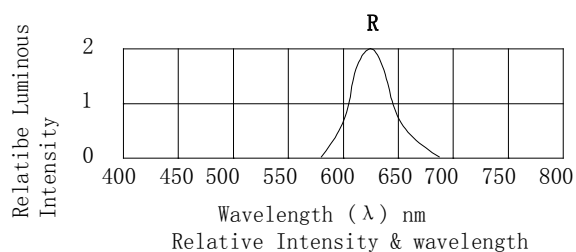
Absolute Maximum Ratings At Ta=25°C

Parameter	Green	Super Red	Unit
Power Dissipation	80	80	mW
Peak Forward Current[1]	150	150	mA
Continuous Forward Current	30	30	mA
Reverse Voltage	5	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		

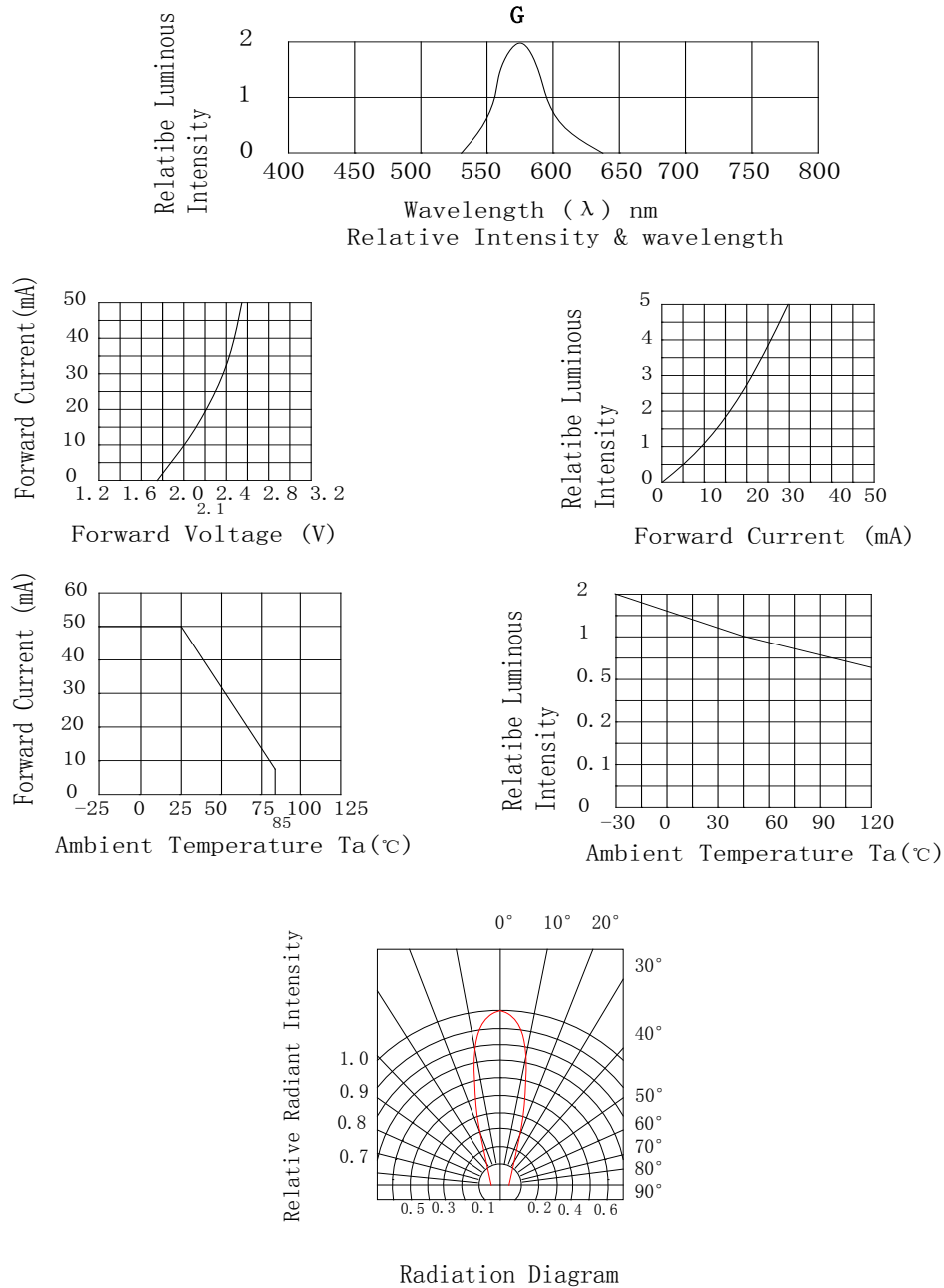
Note:

1. 1/10DutyCycle, 0.1ms Pulse Width

Electrical Optical Characteristics Curves At Ta=25 °C



Electrical Optical Characteristics Curves At Ta=25 °C



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.), within 5 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.