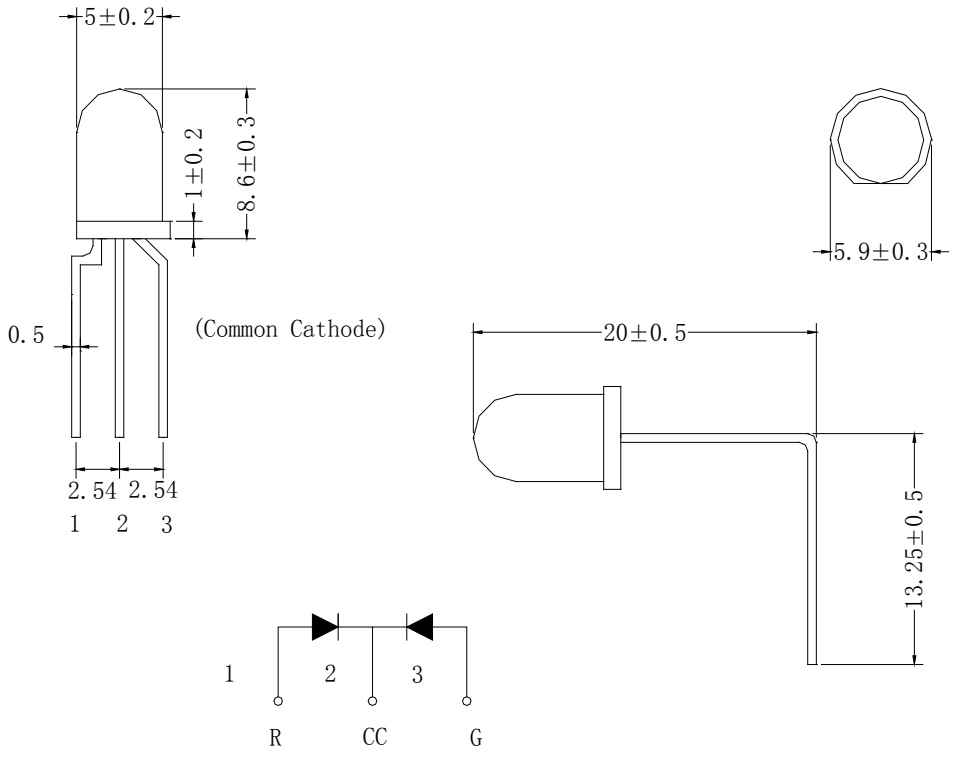
Features

· 5mm 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 ±0.25mm(.01″) unless otherwise noted.
3. Protruded Resin under flange is 1.0mm(0.04″) max.
4. Specifications are subject to change without notice.

www.FantasyLeds.com Sales@FantasyLeds.com

Selection Guide

Part No	Lens Type	Dice	Emitted Color
FDL-5863HRG-TWC1MC-CC-L20-13.25	White Water	GaAsP	Red Green

Electrical / Optical Characteristics At Ta=25 ℃

Symbol	Parameter		Red	Green	Unit	Test Condition
Iv	Luminous Intensity	TYP.	400	200	mcd	IF=20mA
2θ1/2	Viewing Angle	TYP.	30	30	deg	IF=20mA
入 Peak	Peak Emission Wavelength	TYP.	631	574	nm	IF=20mA
入 d	Dominant Wavelength	TYP.	625	571	nm	IF=20mA
△入	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.	10	10	μA	VR =5V

Note:

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

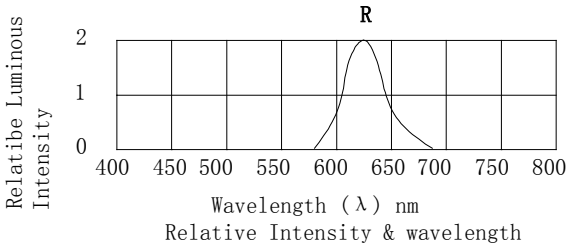
Absolute Maximum Ratings At Ta=25℃

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	-45℃ to + 85℃		
Storage Temperature Range	-55℃ to + 105℃		
Soldering Condition	260℃ For 10 Seconds		

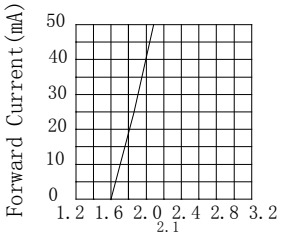
Note:

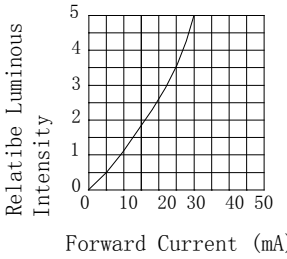
1. 1/10DutyCycle, 0.1ms Pulse Width

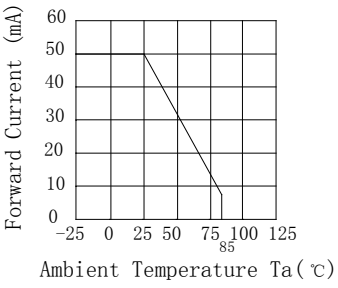
Electrical Optical Characteristics Curves At Ta=25 ℃

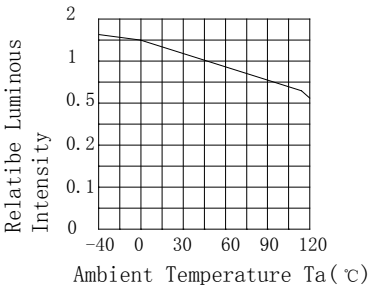


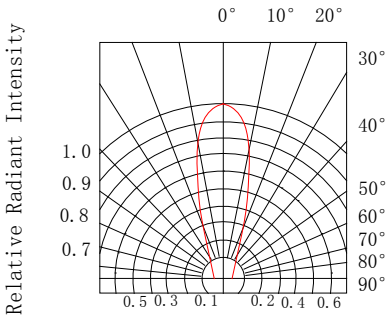
Relative Intensity & wavelength





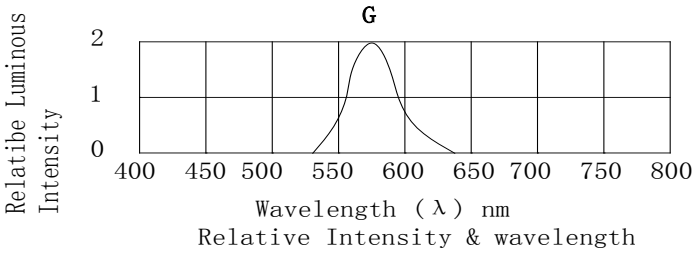




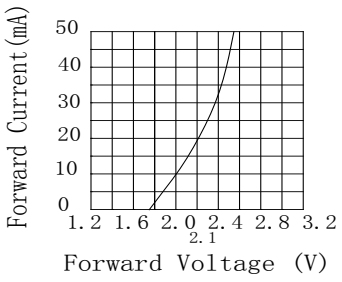


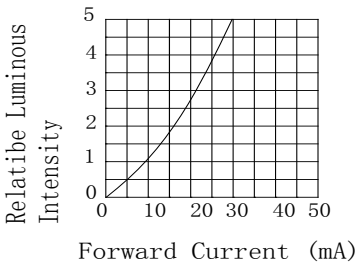
Radiation Diagram

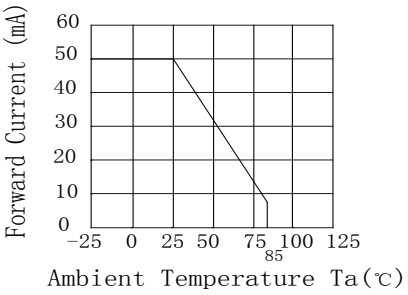
Electrical Optical Characteristics Curves At Ta=25 ℃

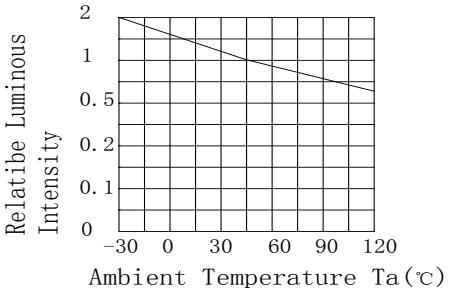


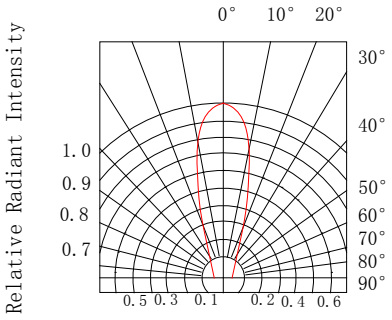
Relative Intensity & wavelength











Radiation Diagram

Notes:

1. The LEDs should be used within a year.
2. The LEDs should be kept in 5~30℃ and 60% RH for less.
3. The LEDs should be used within 24 hours, or else should be kept a 5~30℃ 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	Opertion Life	Connect with a power if=20mA Ta=Under room temperature	1000Hrs	0/20
	Hige Temperature High Humidity	Ta=＋65℃±5℃ RH=90%-95%	240Hrs	0/20
	Hige Temperature Storage	High Ta=＋85℃±5℃	1000Hrs	0/20
	Low Temperature Storage	Low Ta=-35℃±5℃ Test time=1000hrs	1000Hrs	0/20
Environmental Test	Temperature Cycling	-45℃～+105℃ 15min 5min 15min	300 Cycles	0/20
	Thermal Shock	-35℃～±5℃～+85℃～±5℃ 5min 10sec 5min	300 Cycles	0/20
	Solder Resistance	Preheating: 120℃-150℃,within 2 minutes. Operation heating : 260℃(Max.),within5 seconds(Max.)	5Cycles	0/20

Judgment criteria of fialure for the reliability

Measuring items	Symbol	Measuring conditions	Judement criteria for failure
Forward voltage	V_F(V)	I_F=20mA	Over U×1.2
Rvevrse current	I_R(μA)	V_R=5V	Over U×2
Luminous intensity	Iv(mcd)	I_F=20mA	Below S×0.5

Note: 1.U means the upper limit of specified characteristics. S means initial value.
2.Meansurment shall be taken between 2 hours after the test pieces have been returnde to normal ambient cnditions after completion of each test.