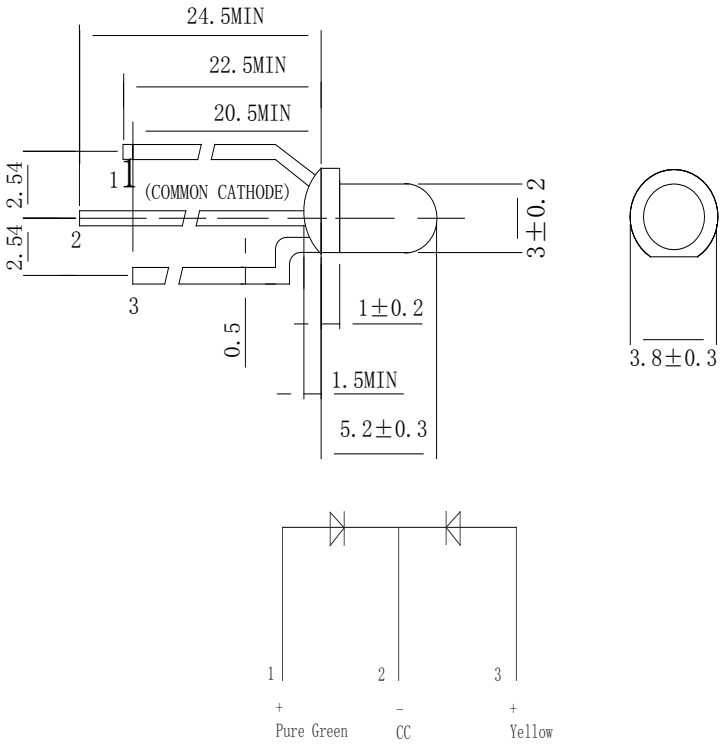
Features

· 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 ±0.25mm(.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-3523PGY-ZWALWG-CC	White Diffused	AlInGaP GaN	Yellow Pure Green

Electrical / Optical Characteristics At Ta=25℃

Symbol	Parameter		Yellow	Pure Green	Unit	Test Condition
Iv	Luminous Intensity	MIN.	90.0	112.0	mcd	IF=20mA
		TYP.	145.0	180.0		
2θ1/2	Viewing Angle	TYP.	30	30	deg	IF=20mA
λ Peak	Peak Emission Wavelength	TYP.	591	530	nm	IF=20mA
λ d	Dominant Wavelength	TYP.	589	525	nm	IF=20mA
△λ	Spectral Line Half-Width	TYP.	15	20	nm	IF=20mA
VF	Forward Voltage	TYP.	2.0	3.1	V	IF=20mA
		MAX.	2.4	3.8		
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 centerline value

Absolute Maximum Ratings At Ta=25℃

Parameter	Yellow	Pure Green	Unit
Power Dissipation	80	110	mW
Peak Forward Current[1]	150	150	mA
Continuous Forward Current	30	30	mA
Reverse Voltage	5	5	V
Electrostatic Discharge Threshold(HBM)	2000	300	V
Operating Temperature Range	-40℃ to + 85℃		
Storage Temperature Range	-40℃ to + 85℃		
Soldering Condition	260℃ For 5 Seconds		

Note:

1. 1/10DutyCycle, 0.1ms Pulse Width

Electrical Optical Characteristics Curves At Ta=25 ℃

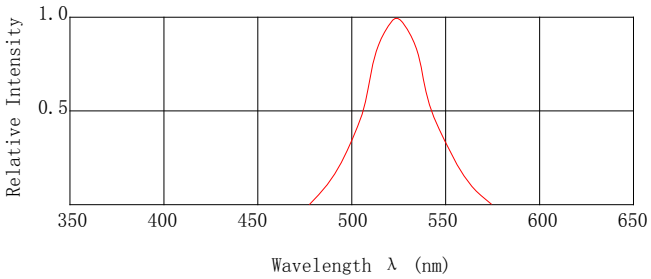


Fig.1 Relative Intensity vs. Wavelength

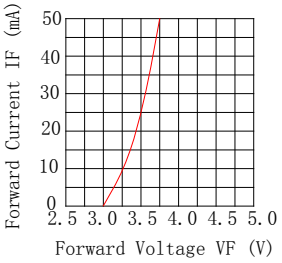


Fig.2 Forward Current VS. Forward Voltage

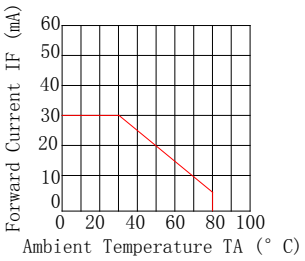


Fig.3 Forward Current Derating Curve

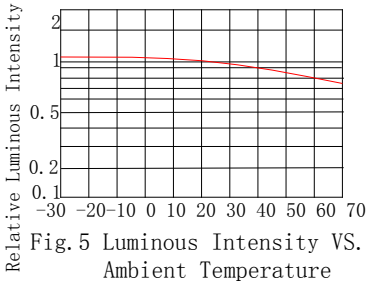


Fig.5 Luminous Intensity VS. Ambient Temperature

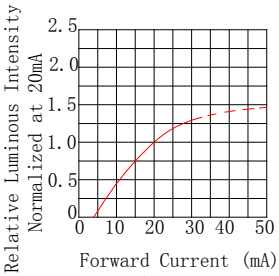
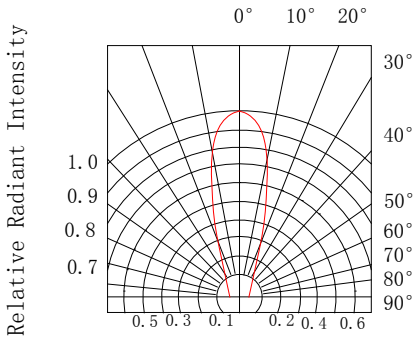
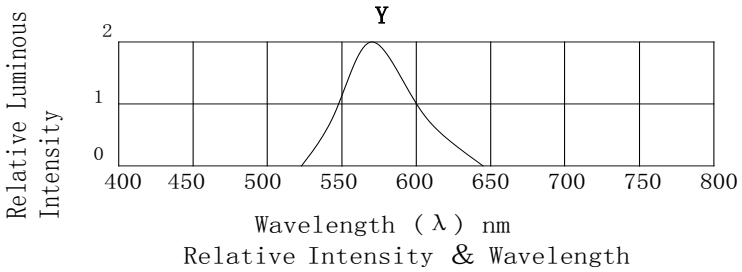


Fig.4 Relative Luminous Intensity VS. Forward Current

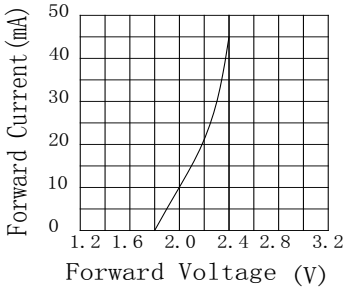


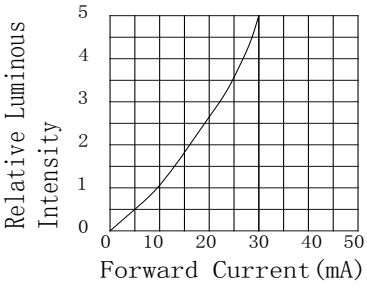
Radiation Diagram

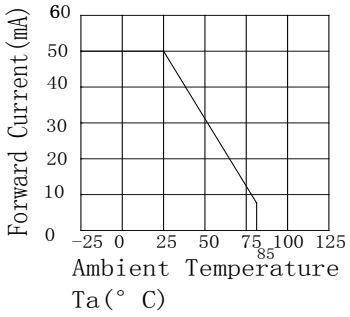
Electrical Optical Characteristics Curves At Ta=25 ℃

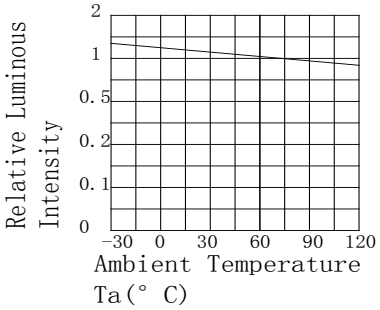


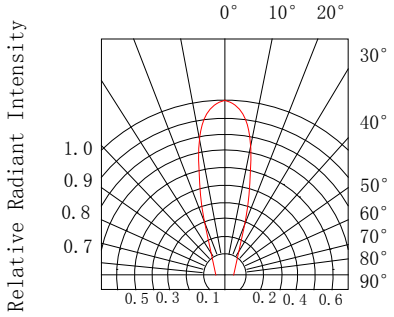
Relative Intensity & Wavelength











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	Operation Life	Connect with a power if=20mA Ta=Under room temperature	1000Hrs	0/20
	High Temperature High Humidity	Ta=＋65℃±5℃ RH=90%-95%	240Hrs	0/20
	High 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 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	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 returned to normal ambient conditions after completion of each test.