FSL-5630090W-GBT120N3540ZJ

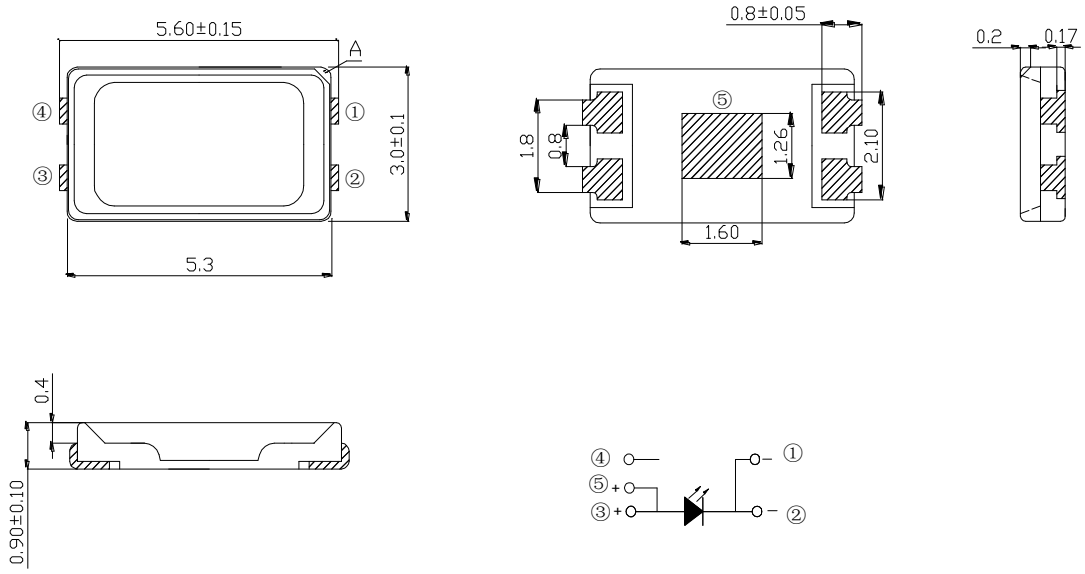
Features

· 5.6mm*3.0mm SMT LED, Super thin (0.90H mm)
· Wide Viewing Angle
· Various Colors
· Compatible with automatic placement equipment.
· Compatible with infrared and vapor phase reflow and wave solder process.
· Meet ROHS Green Product

Applications

· Backlight and Indicator

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2mm (.0079″) unless otherwise noted.
3. Specifications are subject to change without notice
4. This drawing is only for indication,not as a basis for the actual structure.

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Selection Guide

Part No	Lens Type	Dice	Emitted Color
FSL-5630090W-GBT120N3540ZJ	Yellow	InGaN	White

Electrical / Optical Characteristics At Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Φv	Luminous Flux	35.0	38.0	40.0	Lm	IF=120mA
2θ1/2	Viewing Angle		110		deg	
Tc	Color Temperature	12000		15000		IF=120mA
Ra	Color Rendering Index	70				IF=120mA
VF	Forward Voltage	3.0	3.4	4.0	V	IF=120mA
IR	Reverse Current			10	uA	VR=5V

Note:

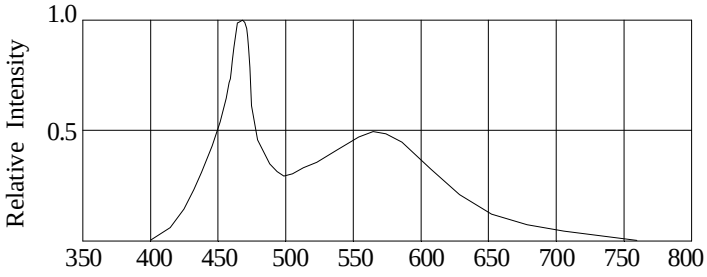
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 optical centerlince value
2. The chromaticity coordinates(x,y) is derived form 1931 CIE chromaticity diagram.
3. The chromaticity coordinates(x,y) guarantee should be added±0.02 tolerance.

Absolute Maximum Ratings At Ta=25℃

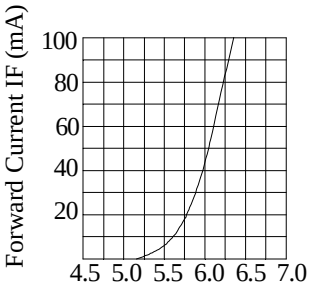
Parameter	White	Unit
Power Dissipation	500	mW
Peak Forward Current(duty 1/10@10ms)	300	mA
Continuous Forward Current (each dice)	150	mA
Dreading Linear From25℃	0.25	mA/℃
Reverse Voltage(each dice)	5	V
Electrostatic Discharge Threshold(HBM)	2000	V
Operating Temperature Range	-20℃ to + 80℃	
Storage Temperature Range	-55℃ to + 85℃	
Soldering Condition	260℃ For 5 Seconds	

Note:

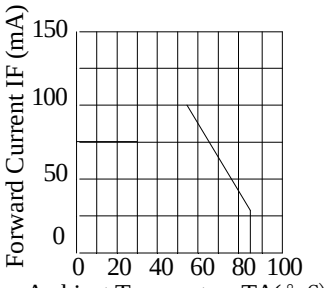
Electrical Optical Characteristics Curves At Ta=25℃



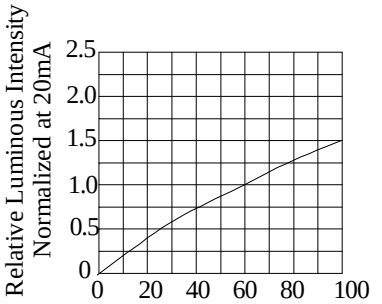
Relative Intensity VS. Wavelength



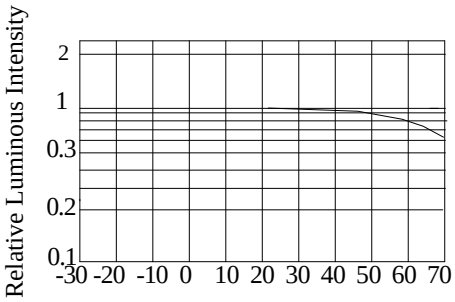
Forward Current vs. Forward Voltage



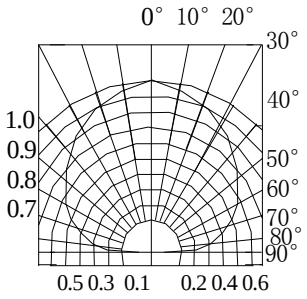
Forward Current Derating Curve



Relative Luminous Intensity vs. Forward Current

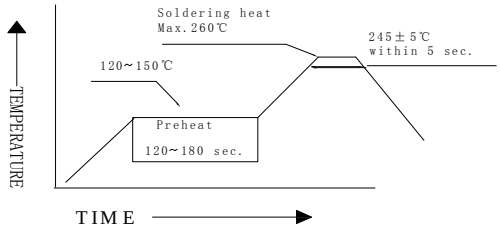


Luminous Intensity vs. Ambient Temperature



Spatial Distribution

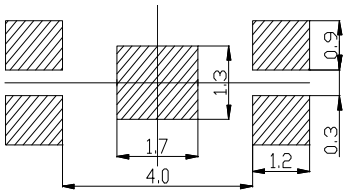
SMT Reflow Soldering Instructions



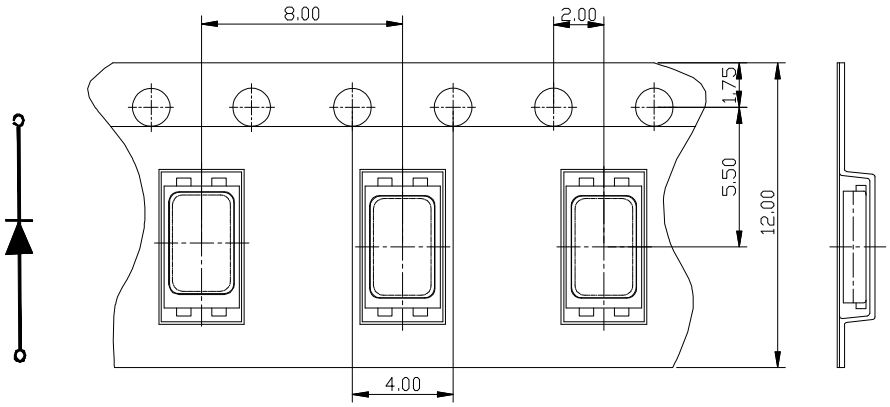
Notes:

1. Selles gives no other assurances regarding the ability of to withstand ESD. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
2. Reflow soldering should not be done more than two times.
3. Do not stress LED when soldering, and do not warp the circuit board after soldering
4. While using Iron, Power dissipation of Iron should be smaller than 25W, and temperature should be controllable. The work should be finished within 2 sec under 320℃ for once only.

Recommended Soldering Pad Dimensions



Package Specifications (Units: mm(inches))



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=60mA 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 failure for the reliability

Measuring items	Symbol	Measuring conditions	Judgment criteria for failure
Forward voltage	VF(V)	IF=60mA	Over U×1.2
Reverse current	IR(μA)	VR=5V	Over U×2
Luminous intensity	Iv(mcd)	IF=60mA	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.