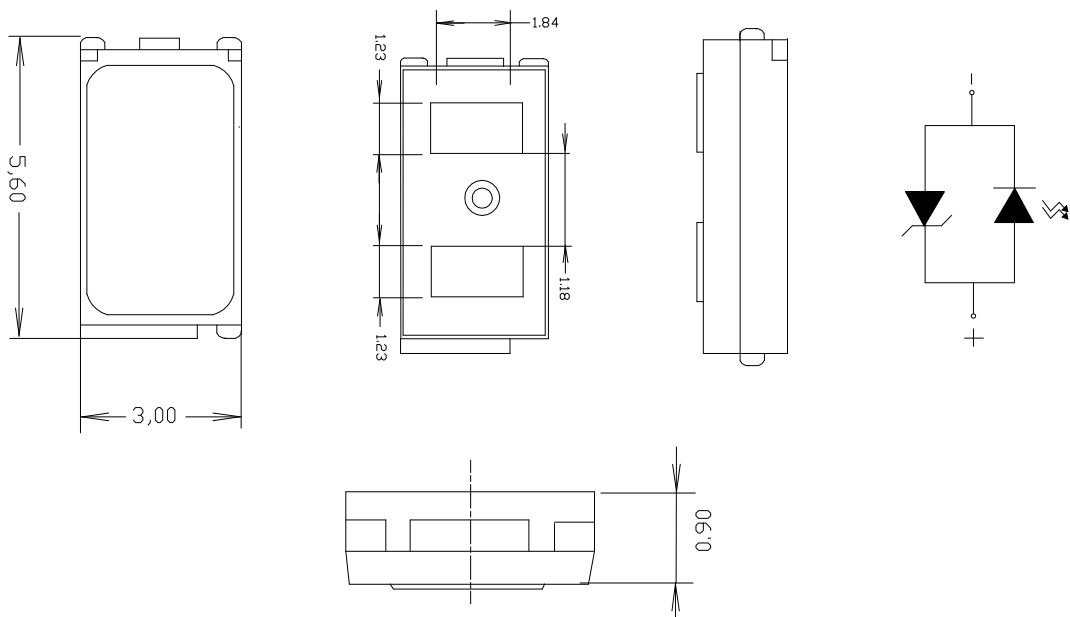


Features

- 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 $\pm 0.2\text{mm}$ (.0079") unless otherwise noted.
3. Specifications are subject to change without notice



Selection Guide

Part No	Lens Type	Dice	Emitted Color
FSL-5630090W-T60ZCCY	Yellow	InGaN	White

Electrical / Optical Characteristics At Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Iv	Luminous Intensity	22		35	lm	IF=60mA
2θ1/2	Viewing Angle		130		deg	
x	Chromaticity Coordinates		0.28		nm	IF=60mA
y			0.26			
VF	Forward Voltage	2.9		3.6	V	IF=60mA

Note:

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

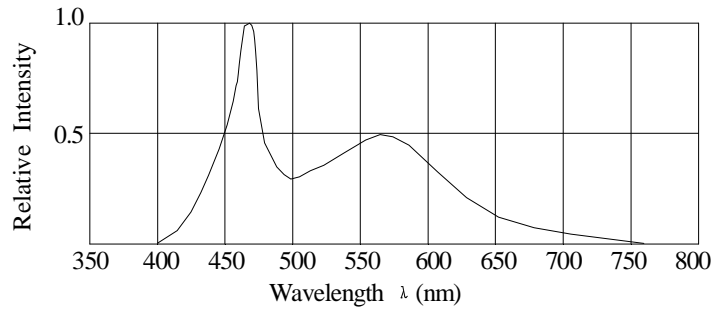
Absolute Maximum Ratings At Ta=25°C

Parameter	White	Unit
Power Dissipation	720	mW
Peak Forward Current(duty 1/10@10ms)	300	mA
Continuous Forward Current (each dice)	100	mA
Dreading Linear From25°C	0.25	mA/°C
Reverse Voltage(each dice)	5	V
Electrostatic Discharge Threshold(HBM)	5000	V
Operating Temperature Range	-20°C to + 80°C	
Storage Temperature Range	-55°C to + 85°C	
Soldering Condition	260°C For 5 Seconds	

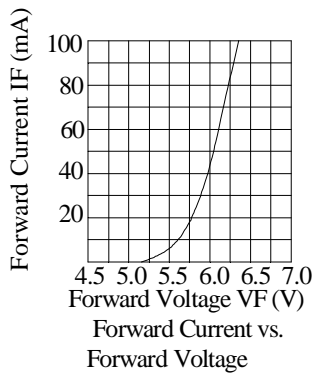
Note:

1. 1/10DutyCycle,0.1msPulseWidth

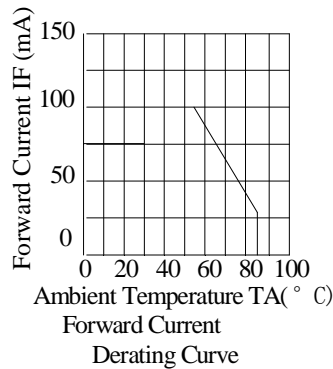
Electrical Optical Characteristics Curves At Ta=25°C



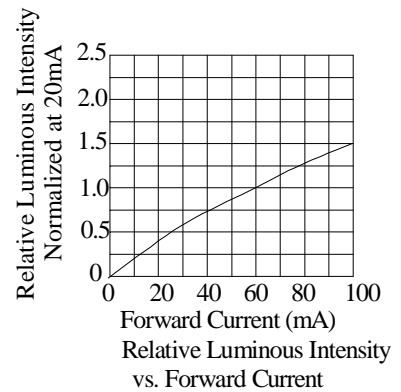
Relative Intensity VS. Wavelength



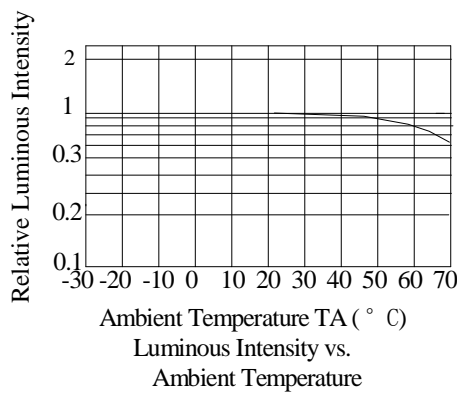
Forward Current vs. Forward Voltage



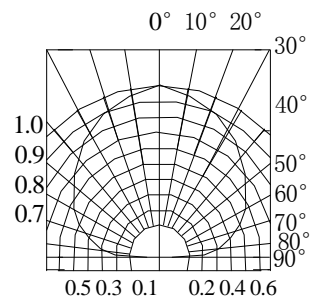
Forward Current Derating Curve



Relative Luminous Intensity vs. Forward Current



Luminous Intensity vs. Ambient Temperature



Spatial Distribution

Bin Range Of Luminous Intensity (+/-15%)

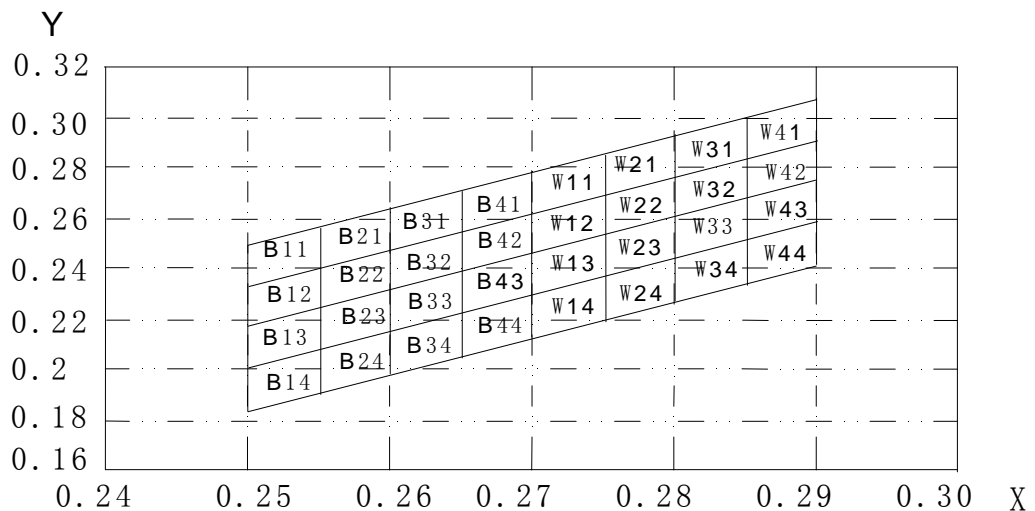
Symbol	Bin Code	Min.	Max.	Unit	Condition
Iv	L22	22	23	lm	IF=60mA
	L23	23	24		
	L24	24	25		
	L25	25	26		
	L26	26	27		
	L27	27	28		
	L28	28	29		
	L29	29	30		
	L30	30	31		
	L31	31	32		
	L32	32	33		
	L33	33	34		
	L34	34	35		

Bin Range Of Forward Voltage (+/-0.1)

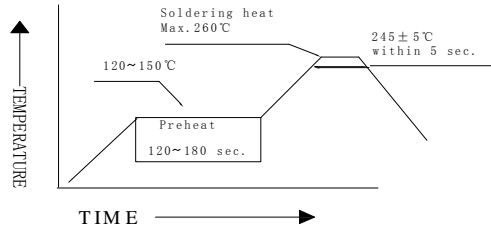
Symbol	Bin Code	Min.	Max.	Unit	Condition
VF	V29	2.9	3.0	V	IF=60mA
	V30	3.0	3.1		
	V31	3.1	3.2		
	V32	3.2	3.3		
	V33	3.3	3.4		
	V34	3.4	3.5		
	V35	3.5	3.6		

CIE Chromaticity Diagram (+/-0.02)

IF=60mA



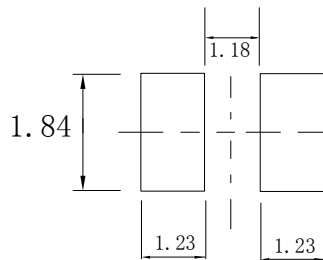
SMT Reflow Soldering Instructions



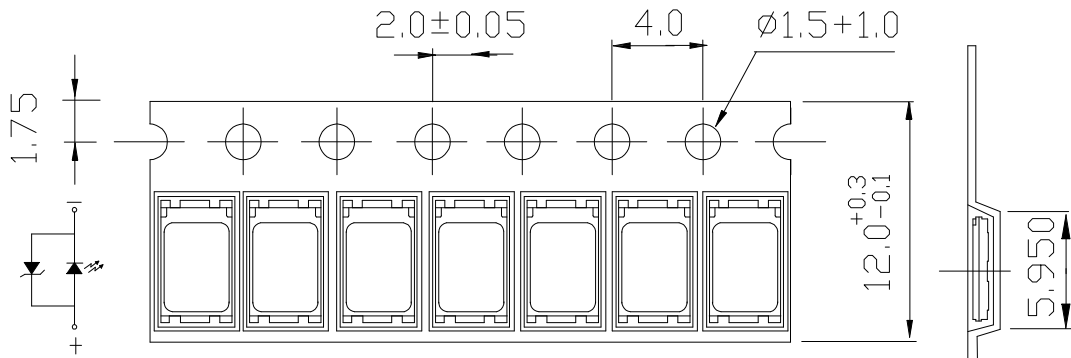
Notes:

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°C 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°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	Opertion Life	Connect with a power if=20mA Ta=Under room temperature	1000Hrs	0/20
	Hige Temperature High Humidity	Ta=+ 65°C±5°C RH=90%-95%	240Hrs	0/20
	Hige 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 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	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.Meansurment shall be taken between 2 hours after the test pieces have been returnde to normal ambient cnditions after completion of each test.