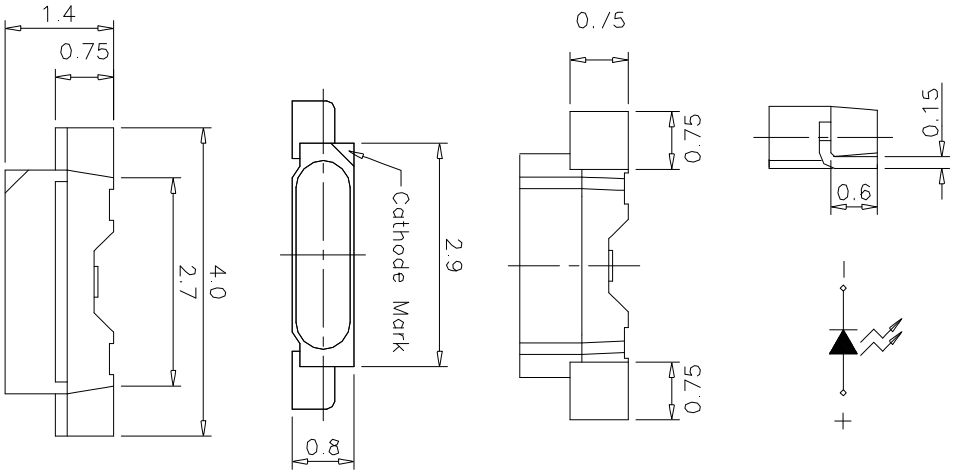
Features

- 4.0mm*1.4mm SMT LED, Super thin (0.80H mm)
- Low Power Consumption
- Wide Viewing Angle
- Various Colors
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow and wave solder process.
- Meet ROHS Green Products

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

Selection Guide

Part No	Lens Type	Dice	Emitted Color
FSL-4014080G-SCHL	Water Clear	AlInGaP	Green

Electrical / Optical Characteristics At Ta=25℃

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
Iv	Luminous Intensity	82		316	mcd	IF=20mA
2θ1/2	Viewing Angle		130		deg	IF=20mA
λ Peak	Peak Emission Wavelength		574		nm	IF=20mA
λ d	Dominant Wavelength	566	571	575	nm	IF=20mA
△λ	Spectral Line Half-Width		15		nm	IF=20mA
VF	Forward Voltage	1.8	2.0	2.5	V	IF=20mA
IR	Reverse Current			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	Green	Unit
Power Dissipation	75	mW
Peak Forward Current[1]	80	mA
Continuous Forward Current	30	mA
Dreading Linear From25℃	0.4	mA/℃
Reverse Voltage	5	V
Operating Temperature Range	-55℃ to + 85℃	
Storage Temperature Range	-55℃ to + 85℃	
Soldering Condition	260℃ For 5 Seconds	

Note:

1. 1/10DutyCycle, 0.1msPulseWidth

Electrical Optical Characteristics Curves At Ta=25℃

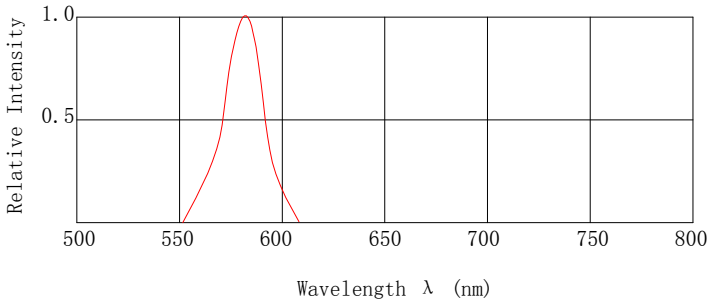


Fig.1 Relative Intensity vs. Wavelength

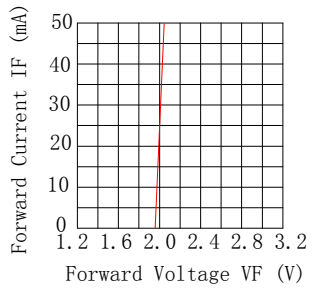


Fig.2 Forward Current VS. Forward Voltage

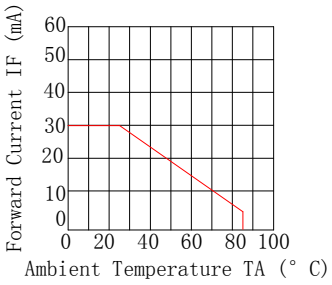


Fig.3 Forward Current Derating Curve

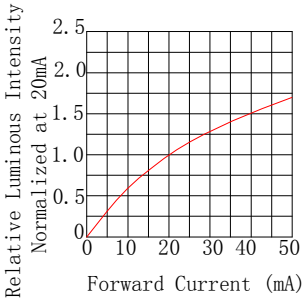


Fig.4 Relative Luminous Intensity VS. Forward Current

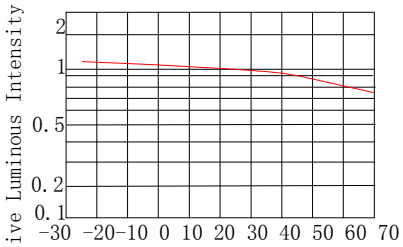


Fig.5 Luminous Intensity VS. Ambient Temperature

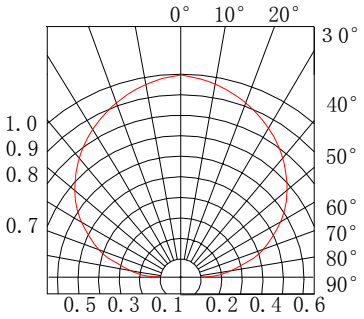


Fig.6 Spatial Distribution

Bin Range Of Luminous Imtensity

Symbol	Bin Code	Min.	Max.	Unit	Condition
Iv	L1	82	145	mcd	IF=20mA
	L2	145	224		
	L3	224	316		

Bin Range Of Forward Voltage

Symbol	Bin Code	Min.	Max.	Unit	Condition
VF	V18	1.8	1.9	V	IF=20mA
	V19	1.9	2.0		
	V20	2.0	2.1		
	V21	2.1	2.2		
	V22	2.2	2.3		
	V23	2.3	2.4		
	V24	2.4	2.5		

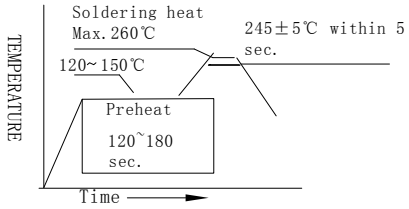
Bin Range Of Dominate Wavelength

Symbol	Bin Code	Min.	Max.	Unit	Condition
入 d	C	566	569	nm	IF=20mA
	D	569	572		
	E	572	575		

Notes:

1. Tolerance of Luminous Intensity +/-15%
2. Tolerance of Forward Voltage +/-0.1V
3. Tolerance of the Dominate Wavelength +/- 1nm

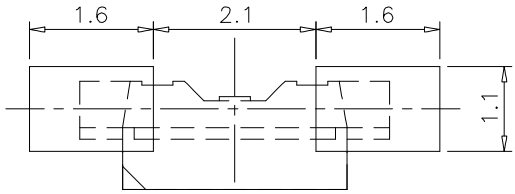
SMT Reflow Soldering Instructions



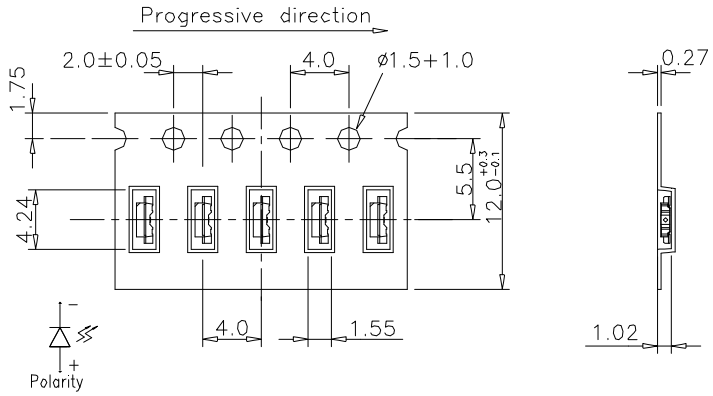
Notes:

1. Sells 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=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.