LEDIST Optoelectronics Co., Ltd.

Part no.: L-T5050WWY

Benefits:

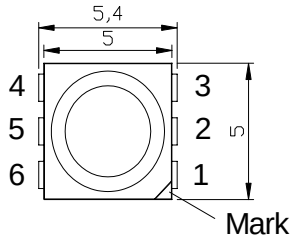
- High intensity
- Low power consumption
- Solid state reliability
- Optimal optical and mechanical design

Features:

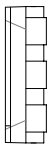
- 5.0*5.0*1.6mm package
- Lens color: Yellow diffused
- Emitting color: Warm White, InGaN
- Viewing angle: 120°

Package Dimensions:

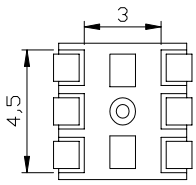
Top View



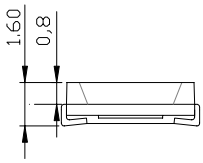
Side View



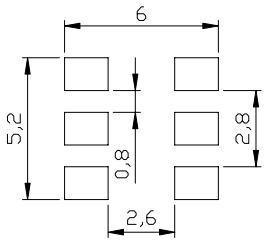
Bottom View



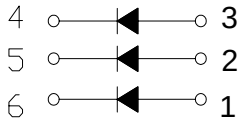
Side View



IR Reflow Soldering



Internal circuit



Notes:

- All dimensions are in millimeters
- Tolerance is ±0.10mm unless otherwise noted.
- Specifications are subject to change without notice

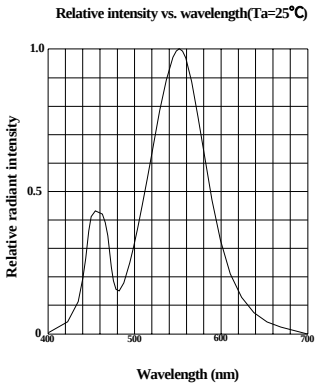
Absolute Maximum Ratings At Ta=25°C

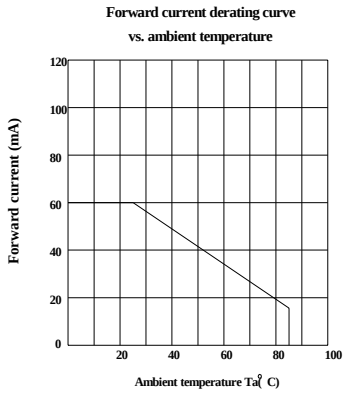
Parameter	Symbol	Ratings	Unit
Power Dissipation	Pd	100*3	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	Ifp	100*3	mA
Forward Current	If	30*3	mA
Reverse Voltage	Vr	5	V
Soldering Temperature Range	Tsol	Reflow soldering for 260℃ within 10s Hand soldering for 300℃ within 3s	
Operating Temperature Range	Topr	-30°C to + 85°C	
Storage Temperature Range	Tstg	-40°C to + 85°C	

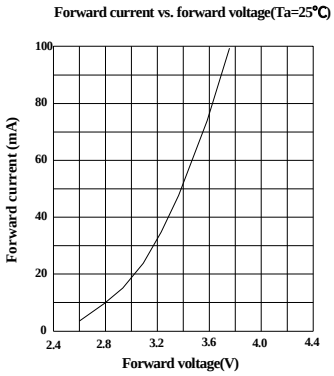
Electrical/Optical Characteristics At Ta=25°C

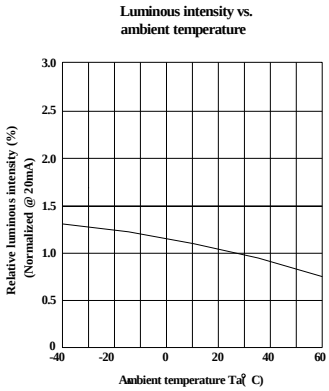
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	4490	5800	—	mcd	I_F=20mA
Viewing Angle	$2\theta_{1/2}$	—	120	—	Deg.	I_F=20mA
Color temperature	CCT	—	3200	—	K	I_F=20mA
Forward Voltage	V_F	—	3.3	3.6	V	I_F=20mA
Reverse Current	I_R	—	—	10	μ A	V_R=5V

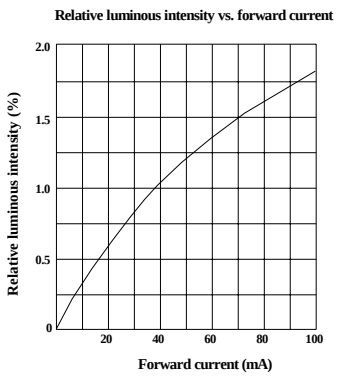
Electrical/Optical Characteristics At Ta=25°C

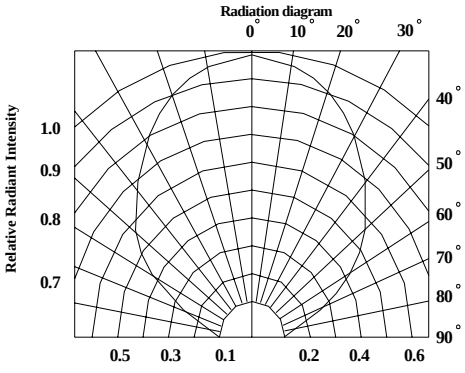






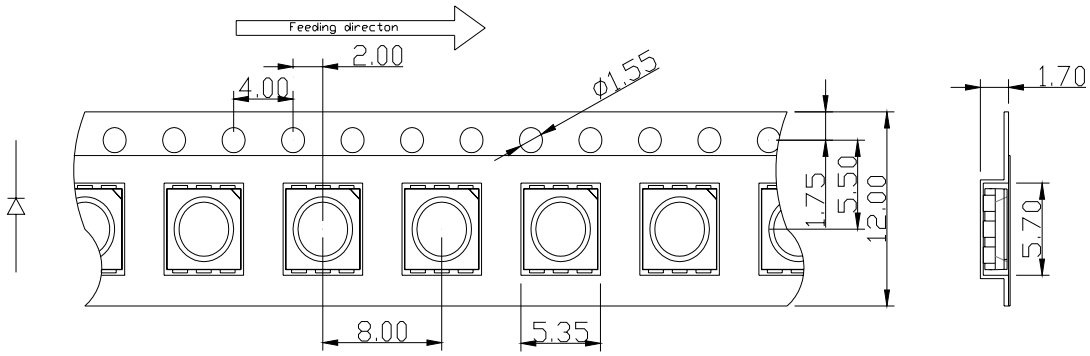




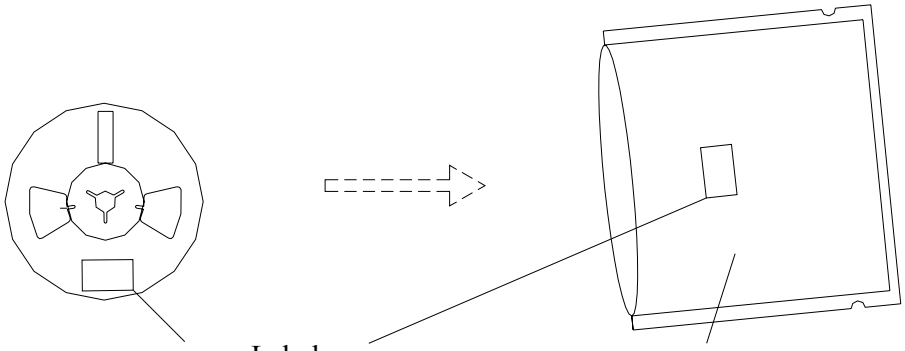


Tapping Specifications (Units: mm)

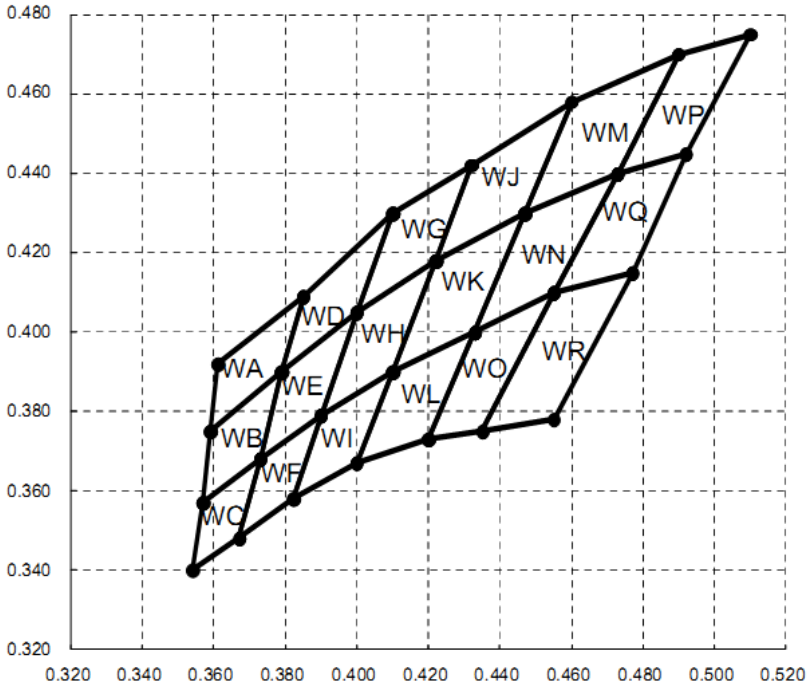
Loaded quantity: 1000 pcs/reel



Package Method:(unit:mm)



CIE Chromaticity Diagram



Reliability Test Items and Conditions:

No.	Test Item	Test Conditions	Sampling q'ty	Ac/Re
1	Operation Life	Test If=20mA Temp: Room temperature Test time=1000hrs	20	0/1
2	High Temperature High Humidity	Temp. =+65℃ RH=90% Test time=240hrs	20	0/1
3	Thermal Shock	-40℃ ~ +100℃ 20min 10s 20min Test Time=100cycles	20	0/1
4	High Temperature Storage	High Temp. =+100℃ Test time=1000hrs	20	0/1
5	Low Temperature Storage	Low Ta=-40℃ Test time=1000hrs	20	0/1
6	Temperature Cycle	-40℃ ~ +100℃ 60min 20min 60min Test Time=20cycle	20	0/1
7	Reflow Soldering	Preheating： 160℃-180℃,within 2 minutes. Operation heating： 260℃(Max.),within10seconds (Max.)	20	0/1

※Judgment criteria of failure for the reliability

·Iv: Below 70% of initial values

·Vf: Over 20% of upper limit value

Note:

- Measurement shall be taken within 2 hours
- The tested LED have been returned to normal ambient conditions before testing.

Precautions for use:

Soldering

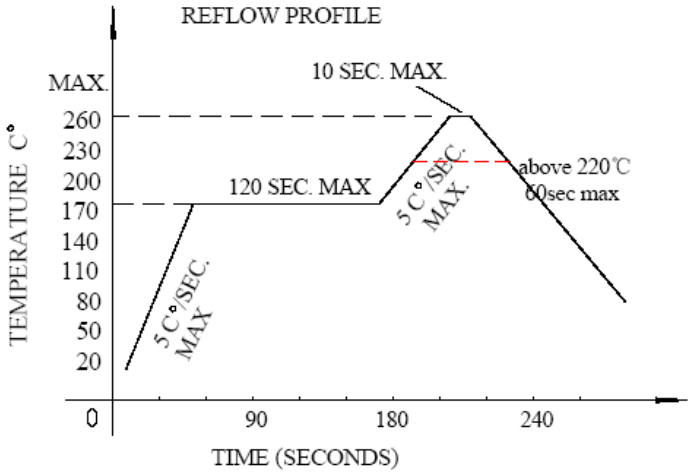
SMD LED encapsulation gumwater is very flexible, outside force easily demolish radiant surface and plastic, As soldering , Please handle with care！

a. With No-clean Flux, according to reflow soldering cure condition when soldering, Reflow soldering should not be done more than two times, simultaneity you must insure clean on the radiant surface. Otherwise, foreign objects can affect radiant color.

b. Don't process manual soldering except repair. Recommended to be soldered with 25W Anti-static iron, The temp. of the iron should be lower than 300℃ and soldering time should not be done more than three seconds, at the same time iron can't touch radiant

surface and plastic.

c. Don't twist LED in course of manual soldering and experiment, Otherwise, the lights will not work possibly.



Cleaning

a. Don't be cleaned with ultrasonic. Recommended to be wiped with isopropyl alcohol or pure alcohol, wiping time should not be more than one minute. LED must be placed at room tempe- rature for fifteen minutes before using. after cleaning, you must insure clean on the radiant surface. Otherwise, foreign objects can affect radiant color.

b. LED can not be in contact with isoamyl acetate、trichloroethylene、acetone、sulfid、nitride、acid、alkali、salt. These matter can destroy LED.

Sealing

a. Sealing glue can not contain sodium ion、sulfid，because these matter can affect fluorescence powder poisoning.

b. When using normal sealing glue, Recommended to be operated life for 168hrs under normal temperature.

Storage

a. Don't open the moisture proof bag before ready to use the LEDs.

b. The LEDs should be kept at 30℃ or less and 60%RH or less before opening the package. The max. storage period before opening the package is 1 year.

c. After opening the package, the LEDs should be kept at 30-35%RH or less, and it should be used within 7 days.

d. If the LEDs be kept over the conditions of c., baking is required before mounting. Baking condition as below: 60±5℃ for 12 hrs for bulk goods, 105±5℃ for 1 hrs for roll goods.

e. The environment have no acid、alkali、corrosive gas、intensively shake and high magnetic field.

Static

a. Static and Peak surge voltage can destroy LED, Avoiding Instantaneous voltage when turn on or turn off the lights.

b. Please wear Anti-static wrist band、Anti-static glove、Anti-static shoes in the course of operation, and the equipment must be grounded.

c. After LED is be destroyed, leakage current increase obviously, and it will be forward voltage falling or failure lamp in the case of low current.

Test

a. Customer must apply the current limiting resistor in the circuit so as to drive the LEDs within the rated current. Otherwise slight voltage shift maybe will cause big current change and burn out will happen.

b. Also, caution should be taken not to overload the LEDs with instantaneous high voltage at the turning ON and OFF of the circuit. Otherwise LED will be destroyed, testing methods as follows:

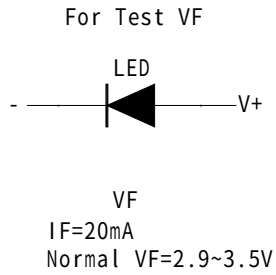


Fig.1

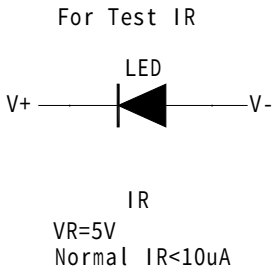


Fig.2

c. The reverse voltage mustn't exceed 5v when lighting on or testing the LED, otherwise, the leds will be damaged.

Else

Radiant color of LEDs have a little change with the current, recommended that LED is used in series and resistance, when lighting, please don't see directly radiant surface of LED, otherwise LED will burn eyes.