



LEDTECH ELECTRONICS CORP.

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[Http://www.ledtech.com.tw](http://www.ledtech.com.tw)

SPECIFICATION

PART NO. : LP1BLR-ST-NLS

1W WARM WHITE HIGH POWER LED



Approved by

Checked by

Prepared by

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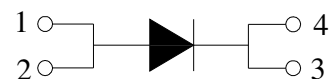
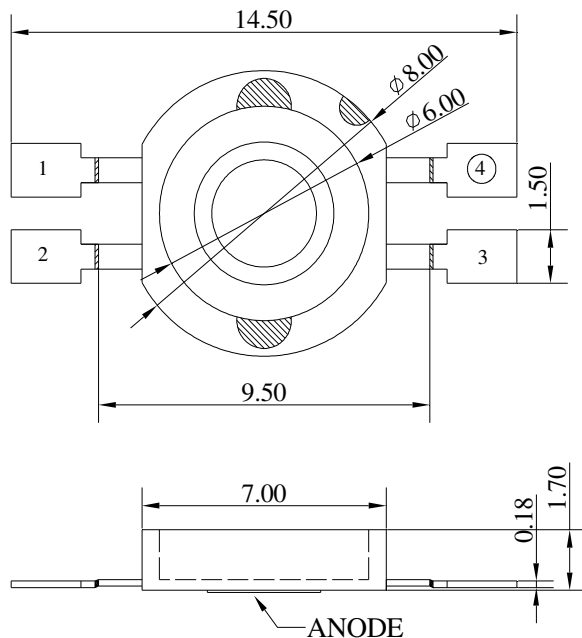
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< Features >

- *Excellent Transiting Heat from LED Chip Operating under 350mA
- *High Luminous Output
- *No UV

< Typical Applications >

- *Reading Lights
- *Portable Flashlight
- *Uplighters and Downlighters
- *Garden lighting
- *LCD Backlights/Light Guides
- *General Lighting

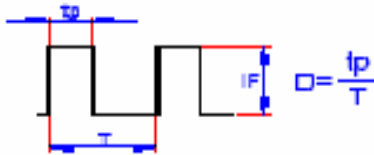
Package Dimensions

* All dimensions are in mm. *Tolerance : +/-0.25mm.

Absolute Maximum Ratings at Ta=25°C :

Parameter	Rating	Unit
LED Junction Temperature	120	°C
Reverse Voltage	5	V
D.C. Forward Current	350	mA
Pulsed Forward Current ; $t_p \leq 100\mu s$, Duty cycle=0.005)*1	1000	mA
Operating Temperature Range	-40 to +75	°C
Storage Temperature Range	-40 to +105	°C
Soldering Temperature	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	6000	V

Duty Cycle :

**Notes:**

- 1、Proper current derating must be observed to maintain junction temperature below the maximum .
- 2、All products not sensitive to ESD damage(6000 Volts by HBM condition).
- 3、Be careful with a powered up current limited power supply, because of current spikes during power up and/or connection. Best practice is to connect the LED then turn up the voltage gradually. People building their own power supplies should design for minimum current spikes during power up and connection.
- 4、For best results the customer needs to provide proper control of the thermal path ,protect against electrical overstress conditions, and ensure that Ledtech emitters are properly attached to the mcpcb/heat sink.

Characteristics at If=350mA ,Vr=5V (Ta=25°C) :

Parameter		Symbol	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	Full	Φ_v	30.5	50	67	lm
	Rank Q		30.5	--	39.7	
	Rank R		39.7	--	51.6	
	Rank S		51.6	--	67	
Forward voltage	Rank 01	VF	2.7	--	3.0	V
	Rank 02		3.0	--	3.25	
	Rank 03		3.25	--	3.5	
	Rank 04		3.5	--	3.75	
	Rank 05		3.75	--	4.0	
Correlated Colour Temperature	Rank W	CCT	2700	--	3200	° K
	Rank X		3200	--	3700	
Thermal Resistance Junction to Case		$R_{\theta_{J-C}}$	--	10	--	°C/W
Temperature Coefficient of Forward Voltage		$\Delta V_F / \Delta T$	--	-2	--	mV/°C
Reverse Current		I_R	--	--	50	μA
Viewing angle at 50% IV		$2\theta_{1/2}$	--	120	--	Deg.

Notes :

- 1.Flux is measured with an accuracy of $\pm 15\%$.
- 2.Forward voltage is measured with an accuracy of $\pm 0.15V$.
- 3.CCT selection acc.to CCT groups and an accuracy of $\pm 300^\circ K$.

Typical Electrical/Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)

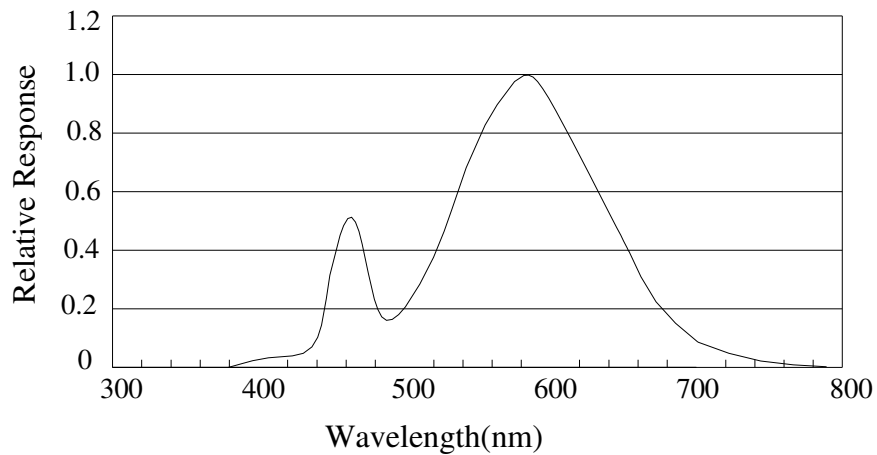
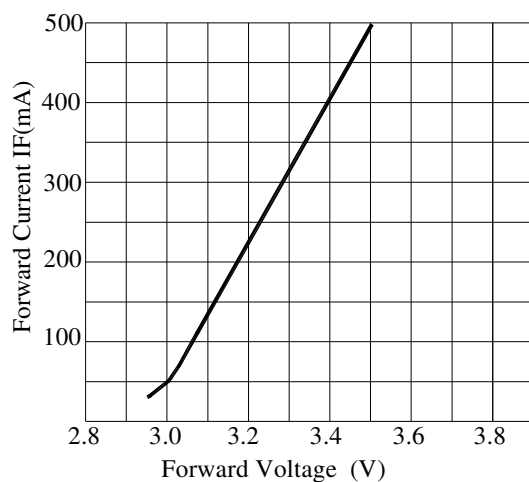
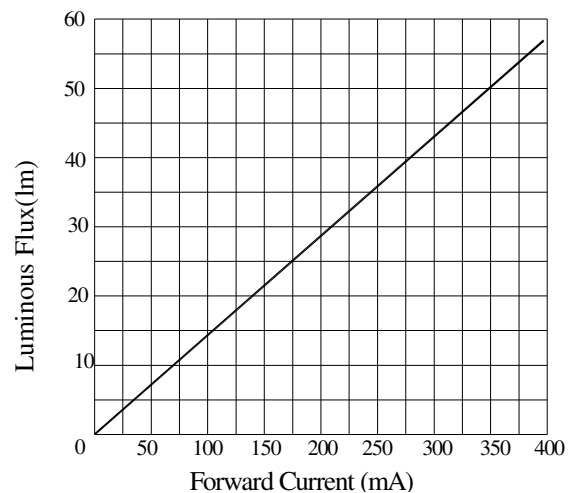


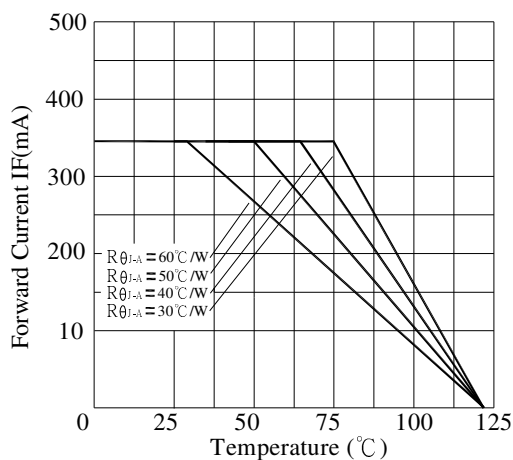
Fig.1 WARM WHITE LED Spectrum VS. WAVELENGTH



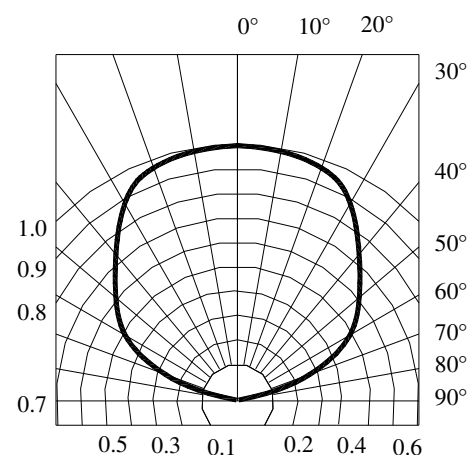
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Flux



Ambient Temperature VS. Forward Current



Radiation Diagram

PRECAUTION IN USE

Storage

Recommended storage environment

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Use within 7 days after opening of sealed vapor/ESD barrier bags.

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions

Baking treatment : 60±5°C for 24 hours.

Fold the opened bag firmly and keep in dry environment.

Soldering

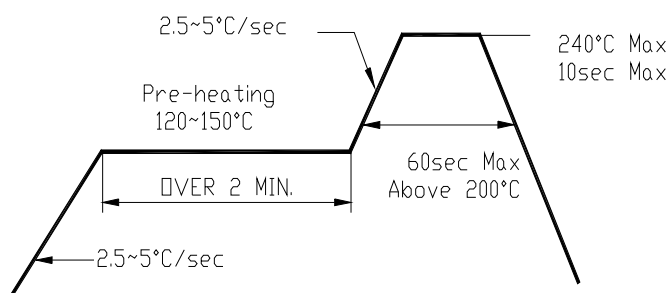
	Reflow Soldering		Hand Soldering	
	Lead Solder	Lead – free Solder	Temperature	350°C Max
Pre-heat	120~150°C	180~200°C	Soldering time	3sec Max
Pre-heat time	120sec Max	120sec Max	(one time only)	
Peak temperature	240°C Max	260°C Max		
Soldering time	10sec Max	10sec Max		
Condition	refer to Temperature-profile 1	refer to Temperature-profile 2		

*After reflow soldering rapid cooling should be avoided.

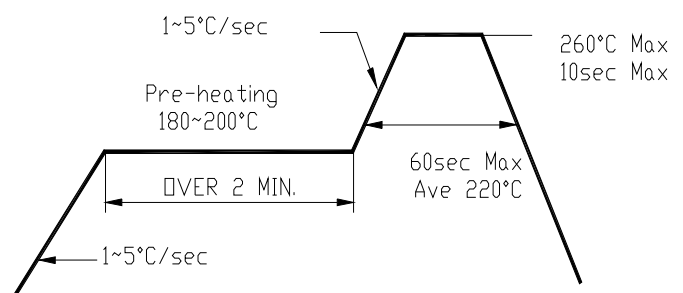
[Temperature-profile (Surface of circuit board)]

Use the conditions shown to the under figure.

< 1 : Lead Solder >

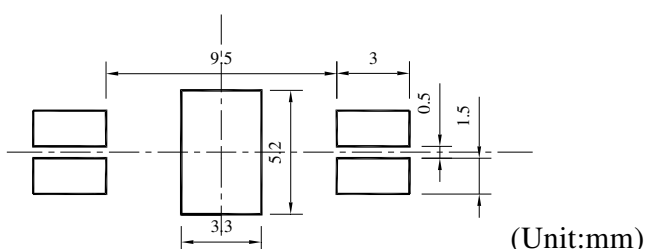


< 2 : Lead-free Solder >



[Recommended soldering pad design]

Use the following conditions shown in the figure.



Handling of Silicone Resin LEDs

Handling Indications

During processing, mechanical stress on the surface should be minimized as much as possible. Sharp objects of all types should not be used to pierce the sealing compound

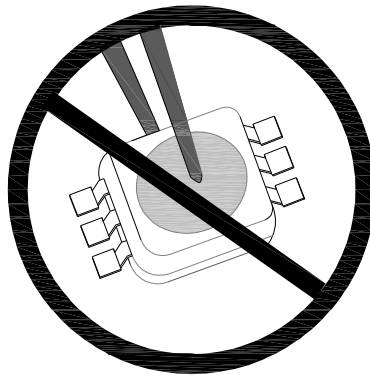


Figure 1

In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.

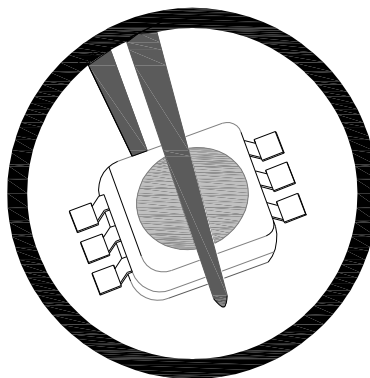
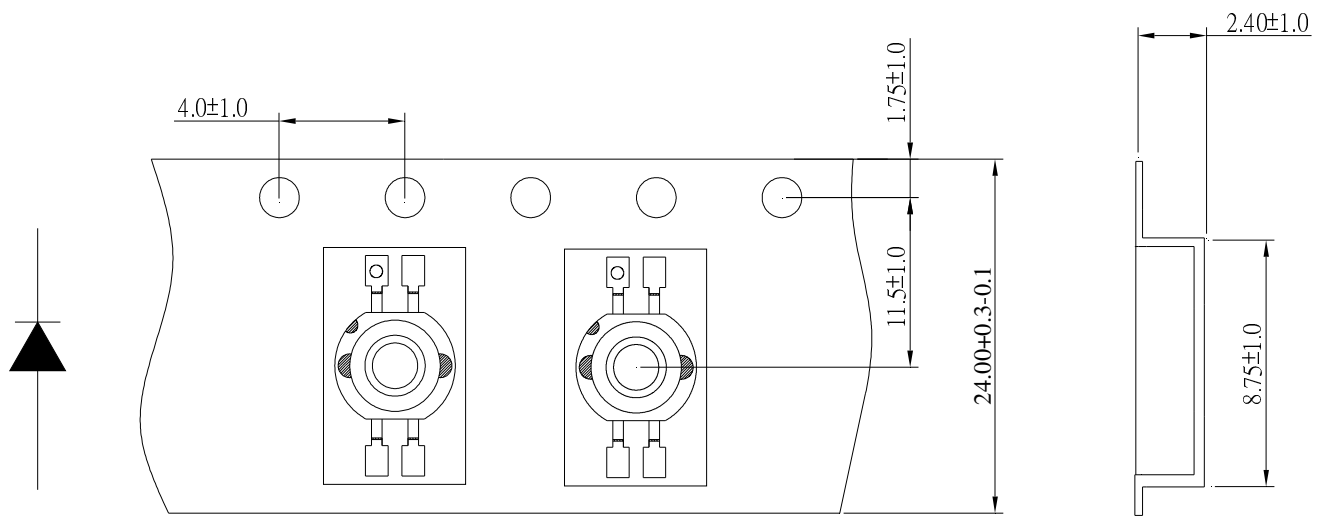


Figure 2

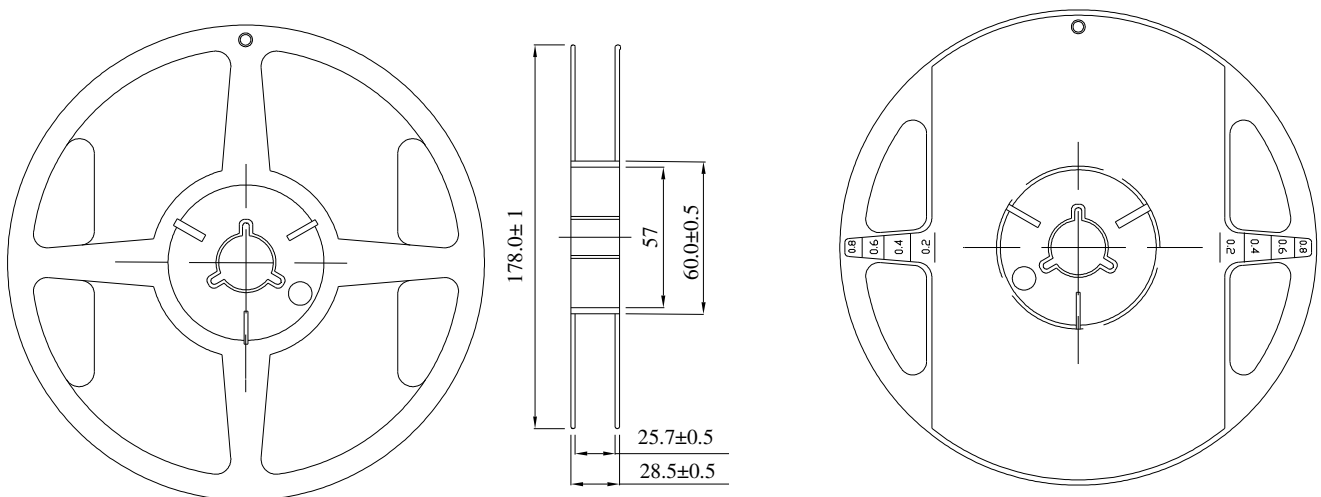
When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the surface of the resin must be prevented.

This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.

Dimensions for Tape



Dimensions for Reel



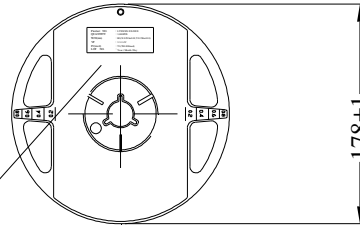
Notes:

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- 2.Specifications are subject to change without notice.

Packing

REEL
QUANTITY: 450 PCS

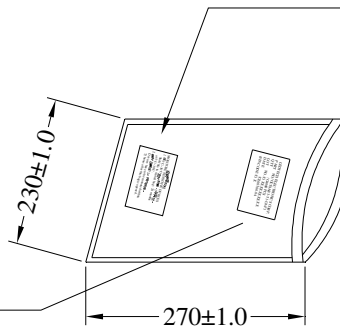
LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



溼氣敏感材料
MOISTURE SENSITIVE DEVICES
1. 在5°C~30°C密封貯藏，1年有效。
Shelf life in sealed bag : 12 months
at 5°C~30°C.
2. 開封後需在168小時內使用。
Devices have to be mounted within
168 hours after this bag is opened .

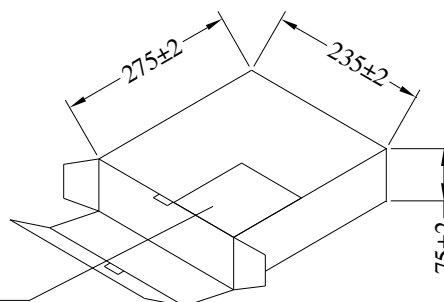
BAG
QUANTITY: 450 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



INSIDE BOX
QUANTITY: 2 BAGS
TOTAL: 900 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



Notes:

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