



LEDTECH ELECTRONICS CORP.

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

SPECIFICATION

PART NO. : LPHML3-HM-UDQ3-60

5.0 x 5.0mm SMD TYPE



Approved by

Checked by

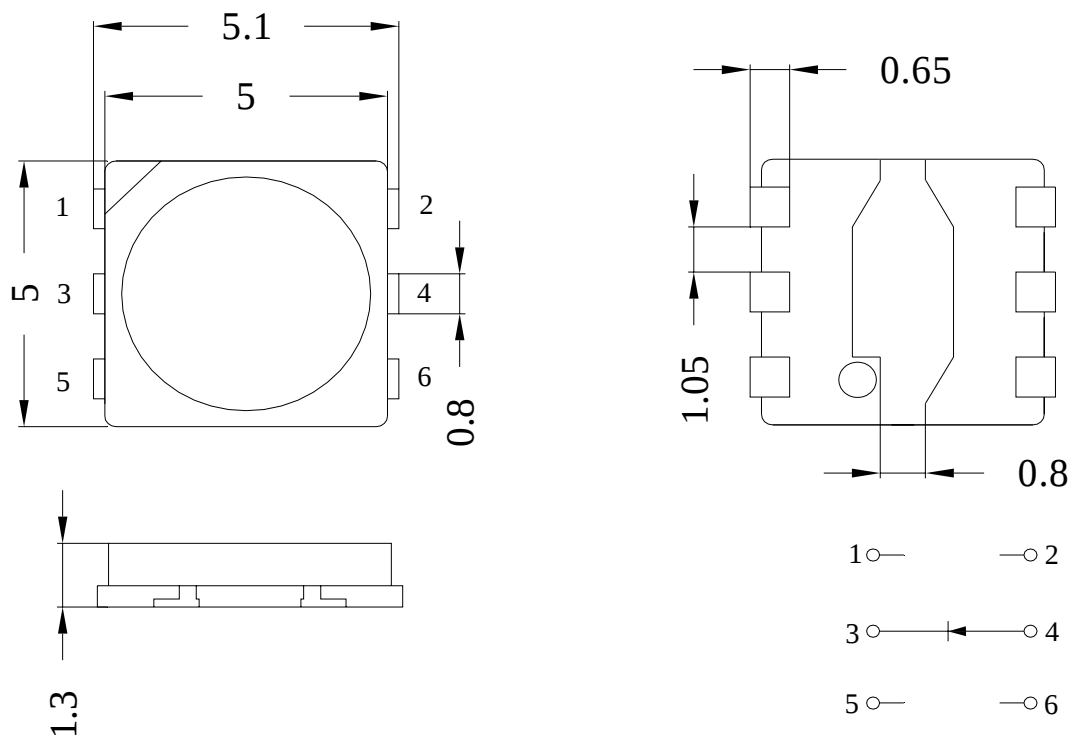
Prepared by

Kj

Lian

Shen

Package Dimensions



Notes:

1. All dimensions are in mm.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without notice.
3. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
LPHML3-HM-UDQ3-60	InGaN/Sapphire	White	Yellow Diffused

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _D	800	mW
Reverse Voltage	V _R	5	V
D.C. Forward Current	I _f	200	mA
Operating Temperature Range	Topr.	-40 to +100	°C
Storage Temperature Range	Tstg.	-40 to +100	°C
Soldering Temperature	Tsld.	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

Electrical and Optical Characteristics:

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity		I _v	If=150mA		---		mcd
Luminous Flux		Φ _v	If=150mA	-	50	-	lm
Forward Voltage		V _F	If=150mA		3.2	4.0	V
CIE Chromaticity Coordinates : X Axis		X	If=150mA		---		
CIE Chromaticity Coordinates : Y Axis		Y	If=150mA		---		
Correlated Colour Temperature	WC	CCT	If=150mA	5500		5750	K
	WD			5750		6000	
	WE			6000		6250	
	WF			6250		6500	
Color Rendering Index		CRI	If=150mA	-	---	-	Ra
Reverse Current		I _r	V _r =5V			50	μA
Viewing Angle		2 θ 1/2	If=150mA		120		deg

Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

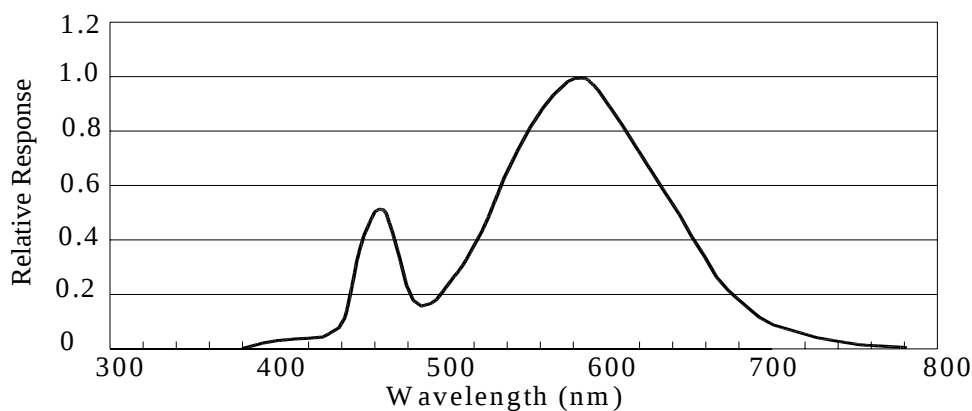
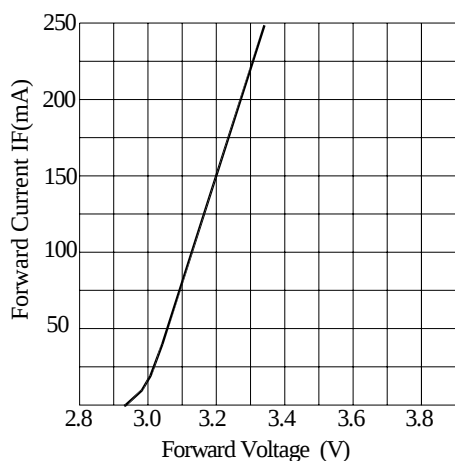
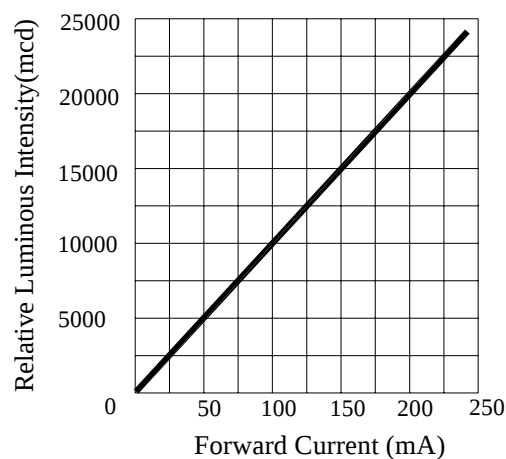


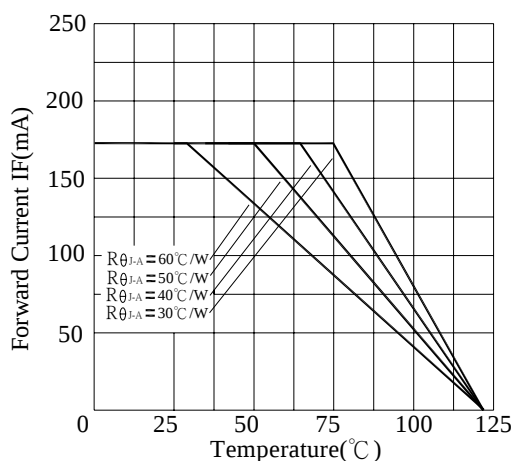
Fig.1 RELATIVE LUMINOUS INTENSITY



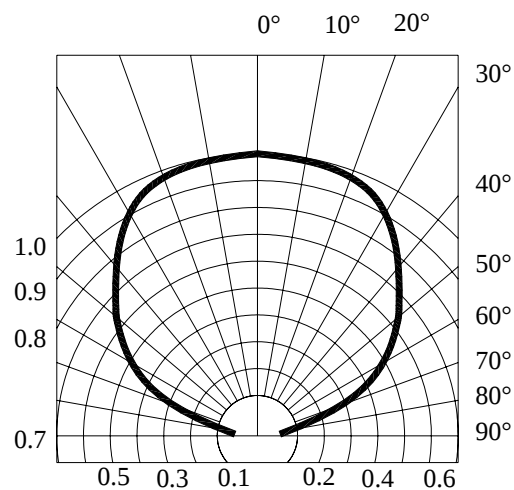
Forward Current VS. Forward Voltage



Forward Current VS. Luminous Intensity



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.

Moisture measures: Please refer to Moisture-sensitive label on reels package bags.

If unused LEDs remain, they should be stored in moisture proof packages, such as sealed container with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

Fold the opened bag firmly and keep in dry environment.

Soldering

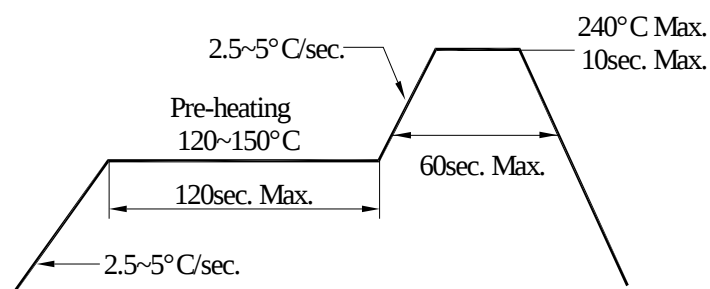
Reflow Soldering			Hand Soldering	
	Lead Solder	Lead – free Solder		
Pre-heat	120~150°C	180~200°C	Temperature	350°C Max.
Pre-heat time	120sec. Max.	120sec. Max.	Soldering time	3sec. Max. (one time only)
Peak temperature	240°C Max.	260°C Max.		
Soldering time	10sec. Max.	10sec. Max.		
Condition	refer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

*After reflow soldering rapid cooling should be avoided.

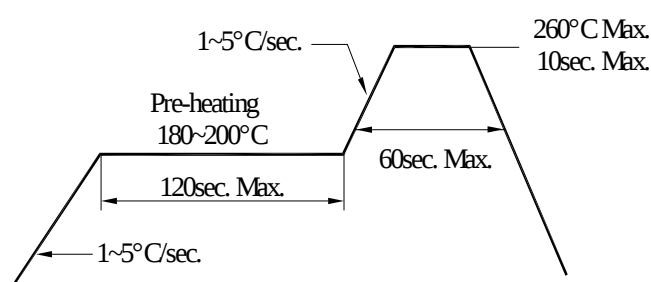
[Temperature-profile (Surface of circuit board)]

Use the conditions shown to the under figure.

< 1 : Lead Solder >

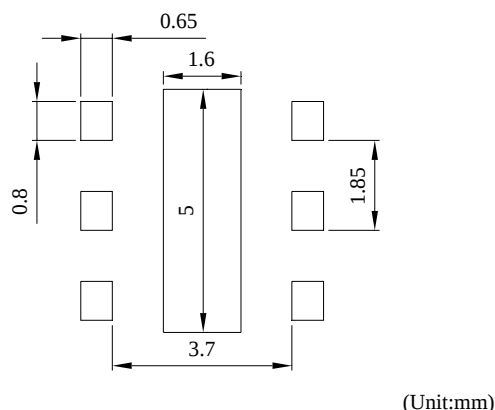


< 2 : Lead-free Solder >



[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

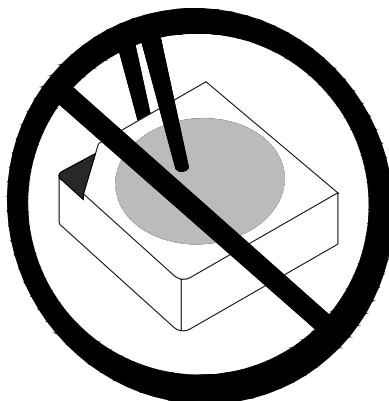


Figure 1

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.

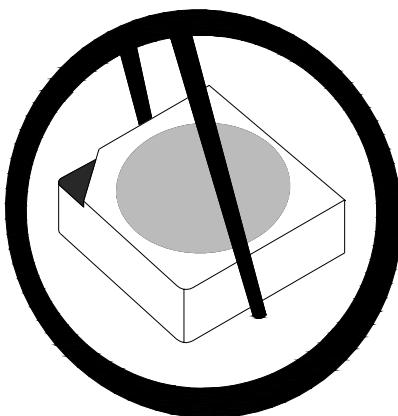


Figure 2

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.

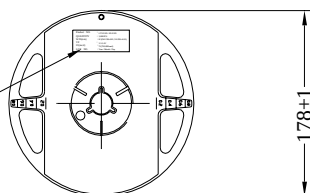
This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.

Packing

REEL

QUANTITY: 1,000 PCS

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

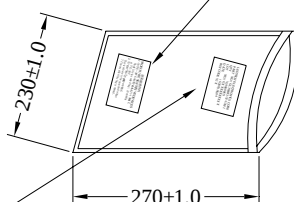


Mositure-sensitive label

BAG

QUANTITY: 1,000 PCS

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

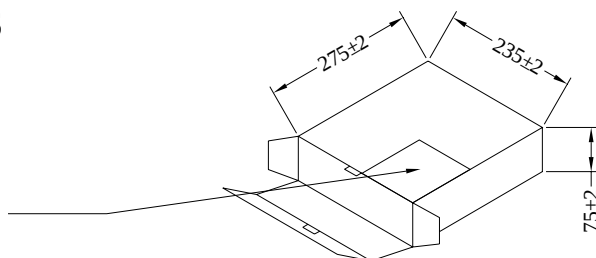


INSIDE BOX

QUANTITY: 4 BAGS

TOTAL: 4,000 PCS

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



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- 2.Specifications are subject to change without notice.