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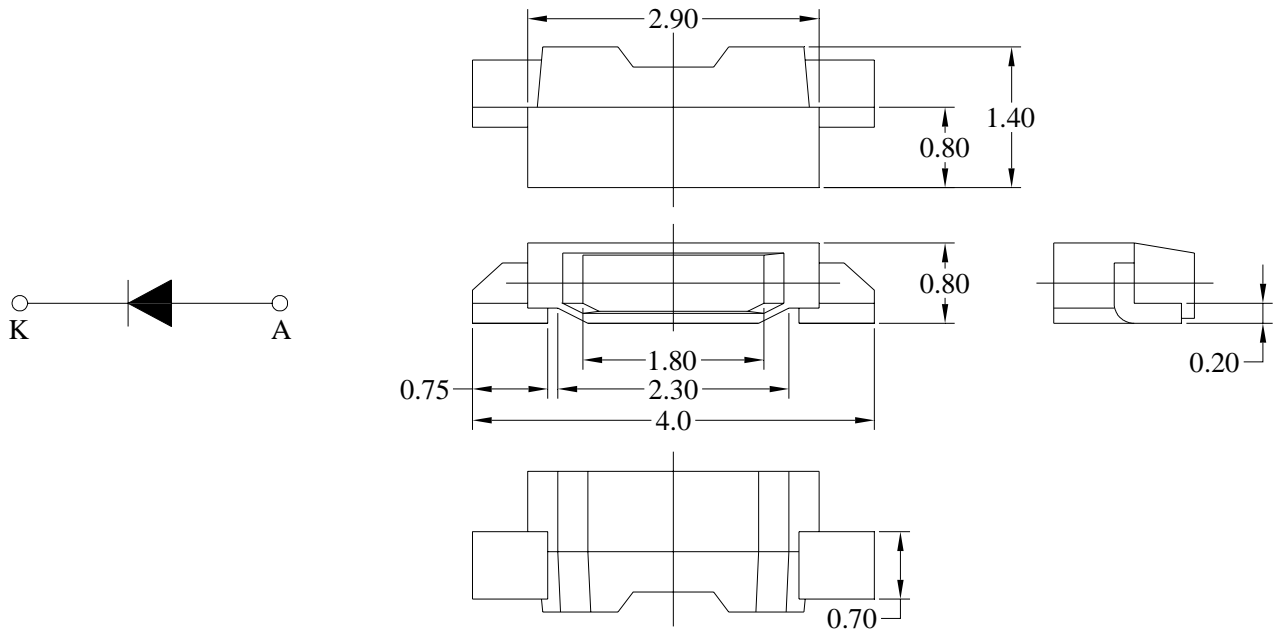
# SPECIFICATION

*PART NO. : LT1VW3-1D-UEE3-SA9-Z*  
**RIGHT ANGLE SMD LED TYPE**



Approved by	Checked by	Prepared by
<i>Tung</i>	<i>Lian</i>	<i>Show</i>

### Package Dimensions



**Notes:**

- 1. All dimensions are in mm.
- 2. Tolerance is  $\pm 0.25$ mm unless otherwise noted.

### Description

Part No.	LED Chip		Lens Color
	Material	Color Coordinates	
LT1VW3-1D-UEE3-SA9-Z	InGaN/Sapphire	X=0.31 Y=0.30	Water Clear

**Absolute Maximum Ratings at Ta=25 °C**

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>d</sub>	120	mW
Reverse Voltage	V <sub>r</sub>	5	V
D.C. Forward Current	I <sub>f</sub>	30	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I <sub>f</sub> (Peak)	100	mA
Operating Temperature Range	T <sub>opr.</sub>	-25 to +85	°C
Storage Temperature Range	T <sub>stg.</sub>	-40 to +100	°C
Soldering Temperature	T <sub>sld.</sub>	Reflow Soldering: 260°C for 10 sec.	
Electric Static Discharge Threshold (HBM)	ESD	6000	V

**Electrical and Optical Characteristics:**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Luminous Intensity	RankT3	I <sub>v</sub>	I <sub>f</sub> =20mA	900	-	1000	mcd
	RankU1			1000	-	1100	
	RankU2			1100		1200	
	RankU3			1200		1300	
Luminous Flux	Φ <sub>v</sub>	I <sub>f</sub> =20mA		1500		mlm	
Forward Voltage	V <sub>f</sub>	I <sub>f</sub> =20mA	-	3.2	4.0	V	
CIE Chromaticity Coordinates : X Axis	X	I <sub>f</sub> =20mA		0.31			
CIE Chromaticity Coordinates : Y Axis	Y	I <sub>f</sub> =20mA		0.30			
Reverse Current	I <sub>r</sub>	V <sub>r</sub> =5V	-	-	50	μA	
Viewing Angle	2θ 1/2	I <sub>f</sub> =20mA		120		deg	

Notes: 1.The datas tested by IS tester.

2. Customer's special requirements are also welcome.

### Typical Electrical/Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)

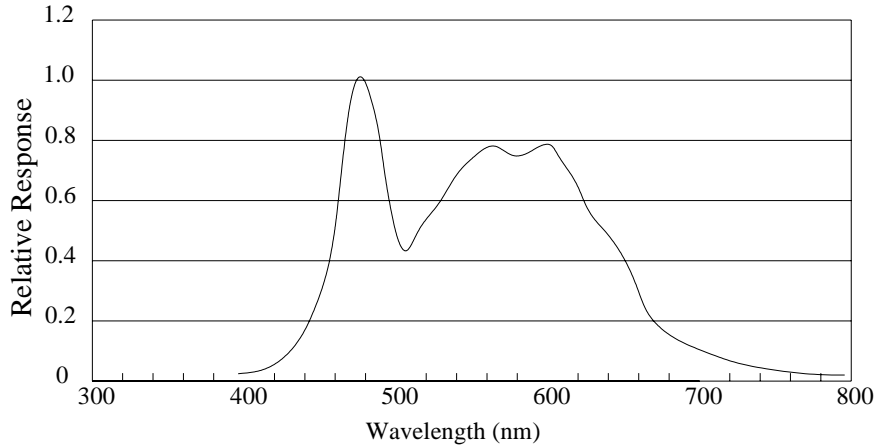
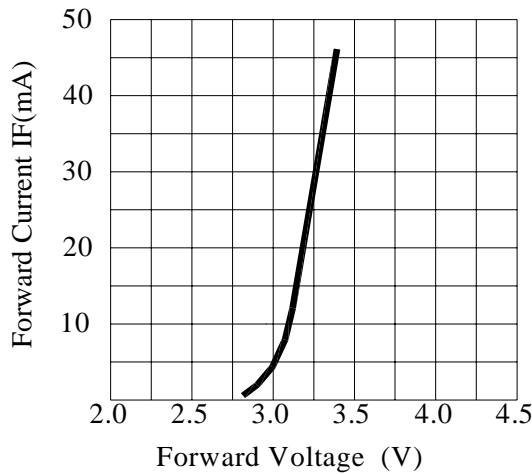
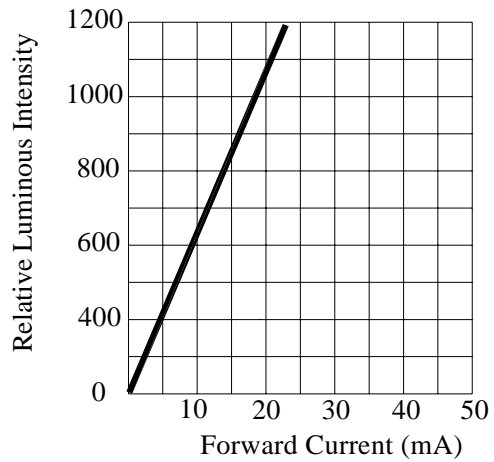


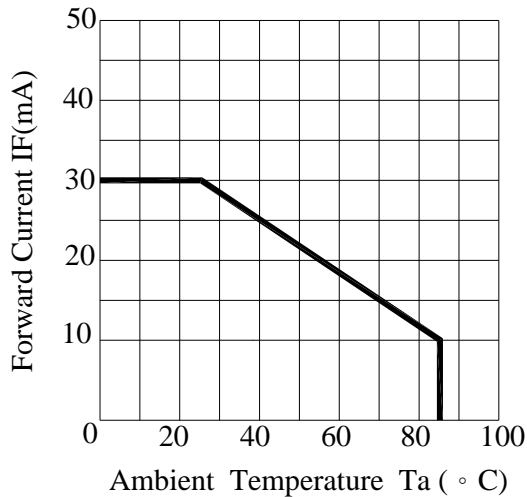
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



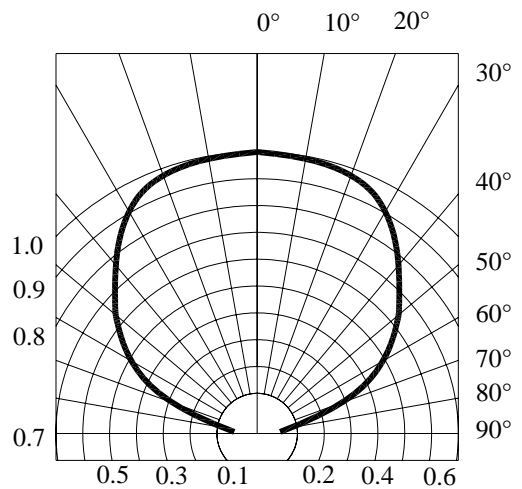
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

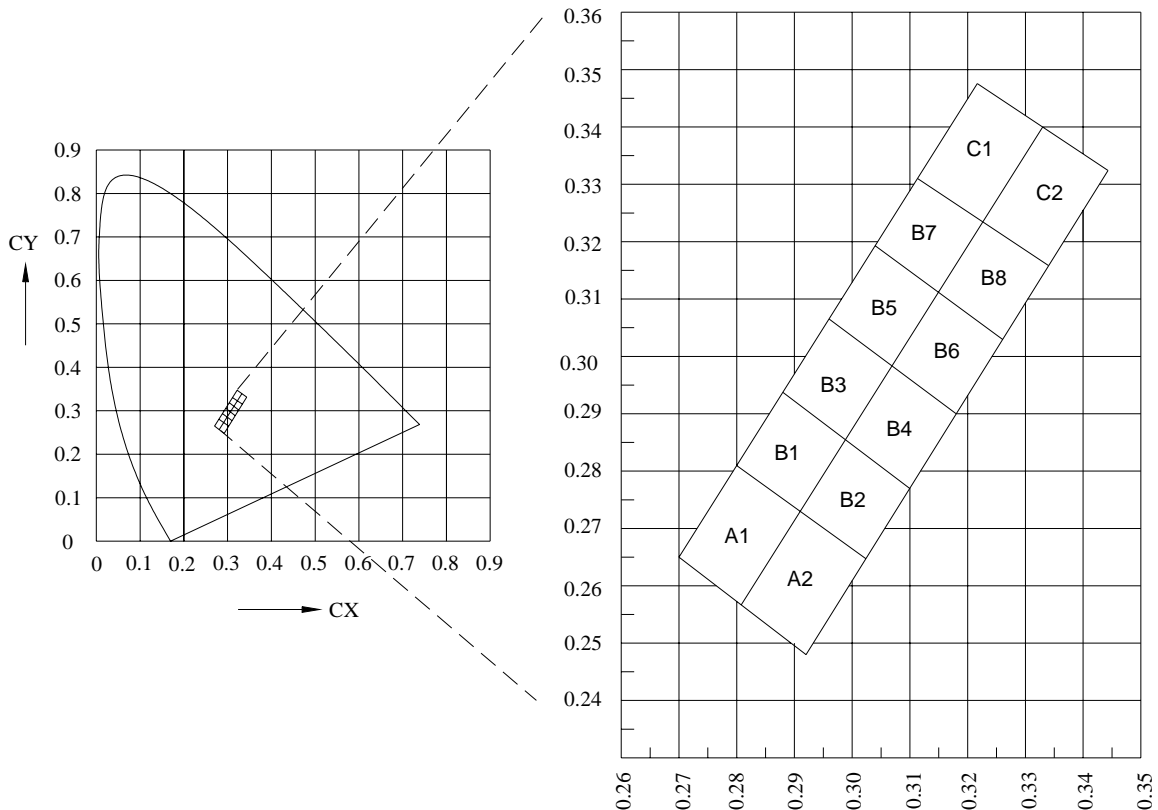
### Chromaticity Coordinates Specifications for Bin Grading:

COLOR RANKS (IF=20mA.Ta=25°C)

BIN	RANK					BIN	RANK				
A1	X	0.27	0.28	0.291	0.281	B5	X	0.296	0.304	0.315	0.307
	Y	0.265	0.282	0.273	0.256		Y	0.307	0.319	0.311	0.298
A2	X	0.281	0.291	0.302	0.292	B6	X	0.307	0.315	0.326	0.318
	Y	0.256	0.273	0.265	0.248		Y	0.298	0.311	0.303	0.29
B1	X	0.28	0.288	0.299	0.291	B7	X	0.304	0.312	0.323	0.315
	Y	0.282	0.294	0.286	0.273		Y	0.319	0.331	0.323	0.311
B2	X	0.291	0.299	0.31	0.302	B8	X	0.315	0.323	0.334	0.326
	Y	0.273	0.286	0.277	0.265		Y	0.311	0.323	0.315	0.303
B3	X	0.288	0.296	0.307	0.299	C1	X	0.312	0.322	0.333	0.323
	Y	0.294	0.307	0.298	0.286		Y	0.331	0.348	0.34	0.323
B4	X	0.299	0.307	0.318	0.31	C2	X	0.323	0.333	0.344	0.334
	Y	0.286	0.298	0.29	0.277		Y	0.323	0.34	0.332	0.315

Note: X.Y Tolerance each Bin limit is±0.01.

### Chromaticity Coordinates & Bin grading 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

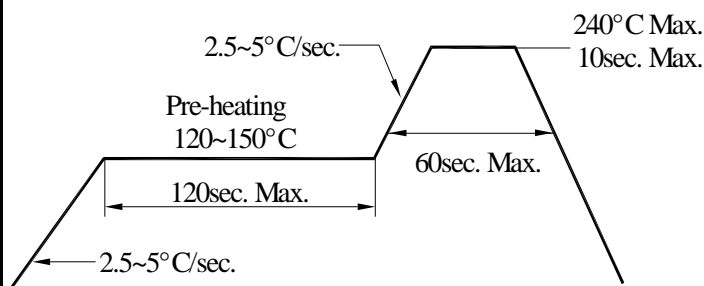
Reflow Soldering		
	Lead Solder	Lead – free Solder
Pre-heat	120~150°C	180~200°C
Pre-heat time	120sec. Max.	120sec. Max.
Peak temperature	240°C Max.	260°C Max.
Soldering time	10sec. Max.	10sec. Max.
Condition	refer to Temperature- profile 1	refer to Temperature- profile 2

\*After reflow soldering rapid cooling should be avoided.

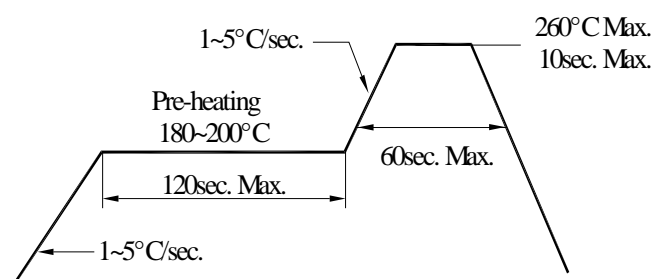
[Temperature-profile (Surface of circuit board)]

Use the conditions shown to the under figure.

< 1 : Lead Solder >

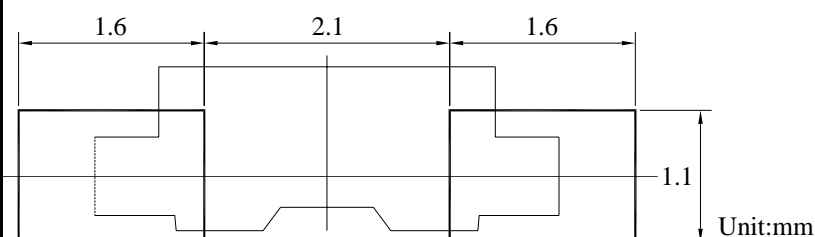


< 2 : Lead-free Solder >



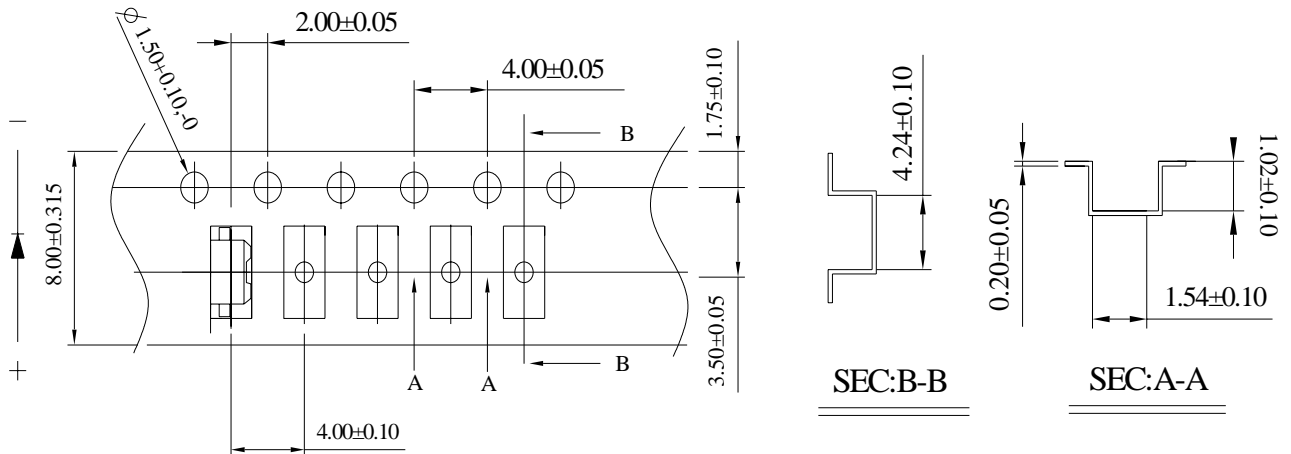
[ Recommended soldering pad design ]

Use the following conditions shown in the figure.

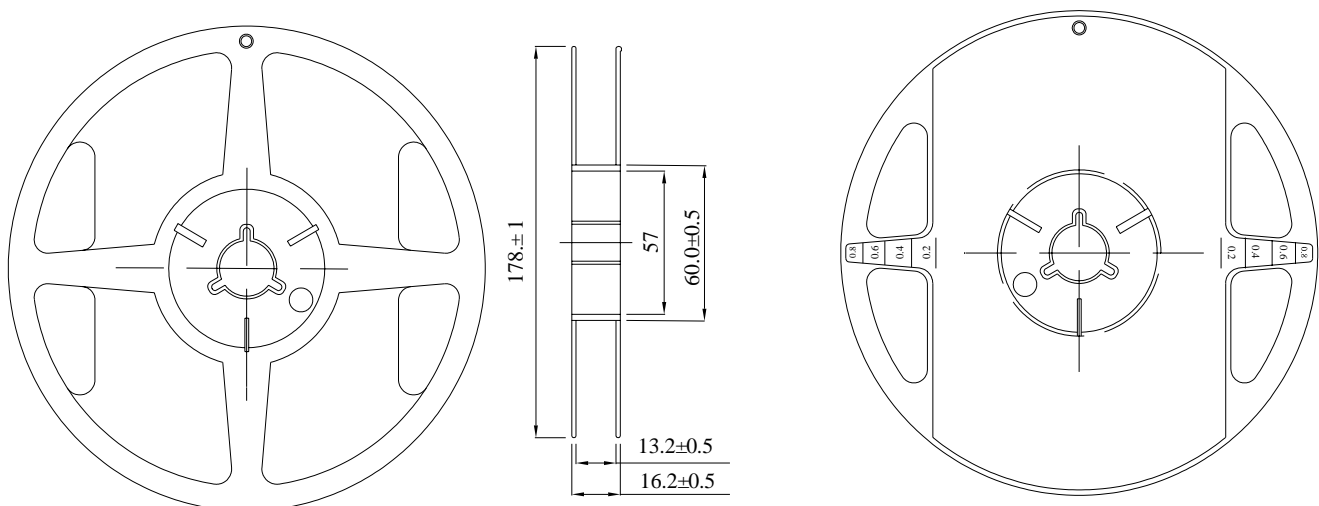


### Dimensions for Tape

Dimensions. (unit : mm)



### Dimensions for Reel



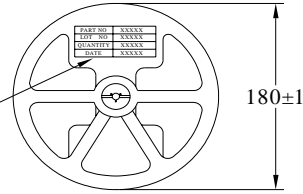
#### Notes:

1. All dimensions are in mm, tolerance is  $\pm 2.0$  mm unless otherwise noted.
2. Specifications are subject to change without notice.

### Packing

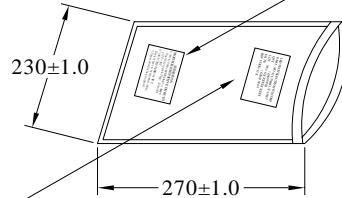
REEL  
QUANTITY: 3,000PCS

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



BAG  
QUANTITY: 3,000 PCS

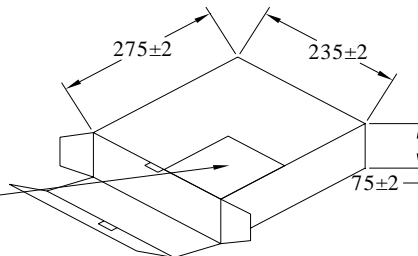
LEDTECH ELECTRONICS CORP.  
PART NO :LTXXXX-XX  
Q'TY : PCS  
LOT NO :XXXXXXXXXX  
DATE :  
BIN CODE:



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 .

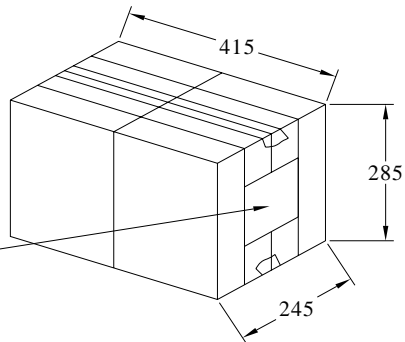
INSIDE BOX  
QUANTITY: 5 BAGS  
TOTAL: 15,000 PCS

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



OUTSIDE BOX  
QUANTITY: 5 BOXES  
TOTAL: 75,000 PCS

C/T NO	XXXXX
PART NO	XXXXX
QUANTITY	XXXXX
N. W.	XXXXX
G. W.	XXXXX
REMARK	XXXXX



**Notes:**

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- 2.Specifications are subject to change without notice.