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# SPECIFICATION

*PART NO. : LP30N3-S087*

COB 60 x 60mm TYPE



Approved by	Checked by	Prepared by
王方波	蘇智良	顏保宏





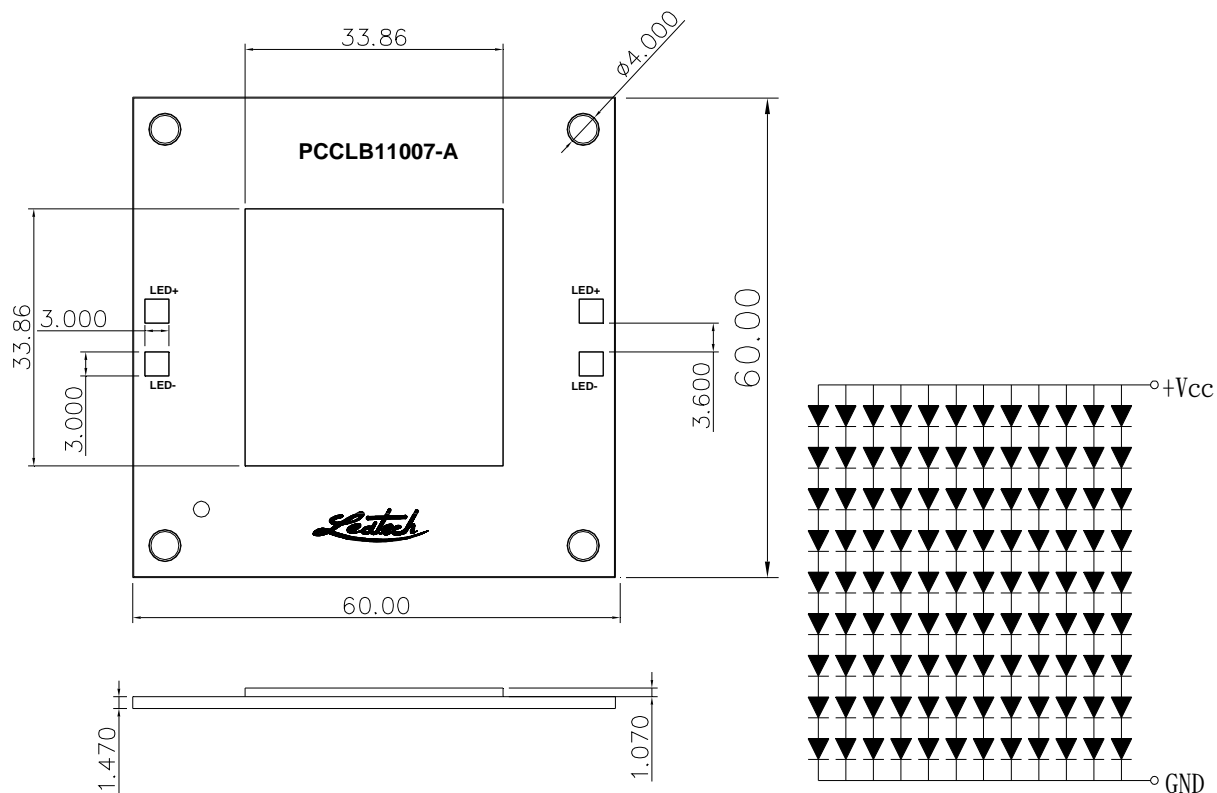
## Features

- Pb-Free soldering application
- RoHS compliance
- Multi-Chip package
- High Reliability

## Application

- Bay-light module
- Indoor decorative lighting
- Illumination
- Automotive Application
- Architectural Lighting
- Indicator / Decoration

**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	Emitting Color	
LP30N3-S087	InGaN/Sapphire	White	Yellow Diffused

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

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	22.4	W
D.C. Forward Current	I <sub>f</sub>	700	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I <sub>f</sub> (Peak)	750	mA
Operating Temperature Range	T <sub>opr.</sub>	-40 to +100	°C
Storage Temperature Range	T <sub>stg.</sub>	-40 to +100	°C
Solder Heat Resistance	SHR	Hand Soldering:300±5°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

**Electrical and Optical Characteristics :**

Parameter	Symbol	Condition	Values			Units
			Min.	Typ.	Max.	
Luminous Flux		I <sub>F</sub> =700mA		1778		lm
	Rank L2		1500	--	2500	
	Rank L3		2500	--	3500	
Forward voltage		I <sub>F</sub> =700mA		27.5		V
	Rank V2		25	--	29	
	Rank V3		29	--	32	
Correlated Color Temperature	CCT	I <sub>F</sub> =700mA	5500	--	6500	K
CIE Chromaticity Coordinates: X Axis	X	I <sub>F</sub> =700mA	--	0.3218	--	
CIE Chromaticity Coordinates: Y Axis	Y	I <sub>F</sub> =700mA	--	0.3353	--	
Reverse Current	I <sub>R</sub>	V <sub>r</sub> =5V	--	--	50	μA
Color Rendering Index	CRI	I <sub>F</sub> =700mA	80	--	--	Ra
Viewing angle at 50% IV		2θ1/2	--	120	--	Deg.

Notes:

1. The data tested by IS tester.
2. Customer's special requirements are also welcome.

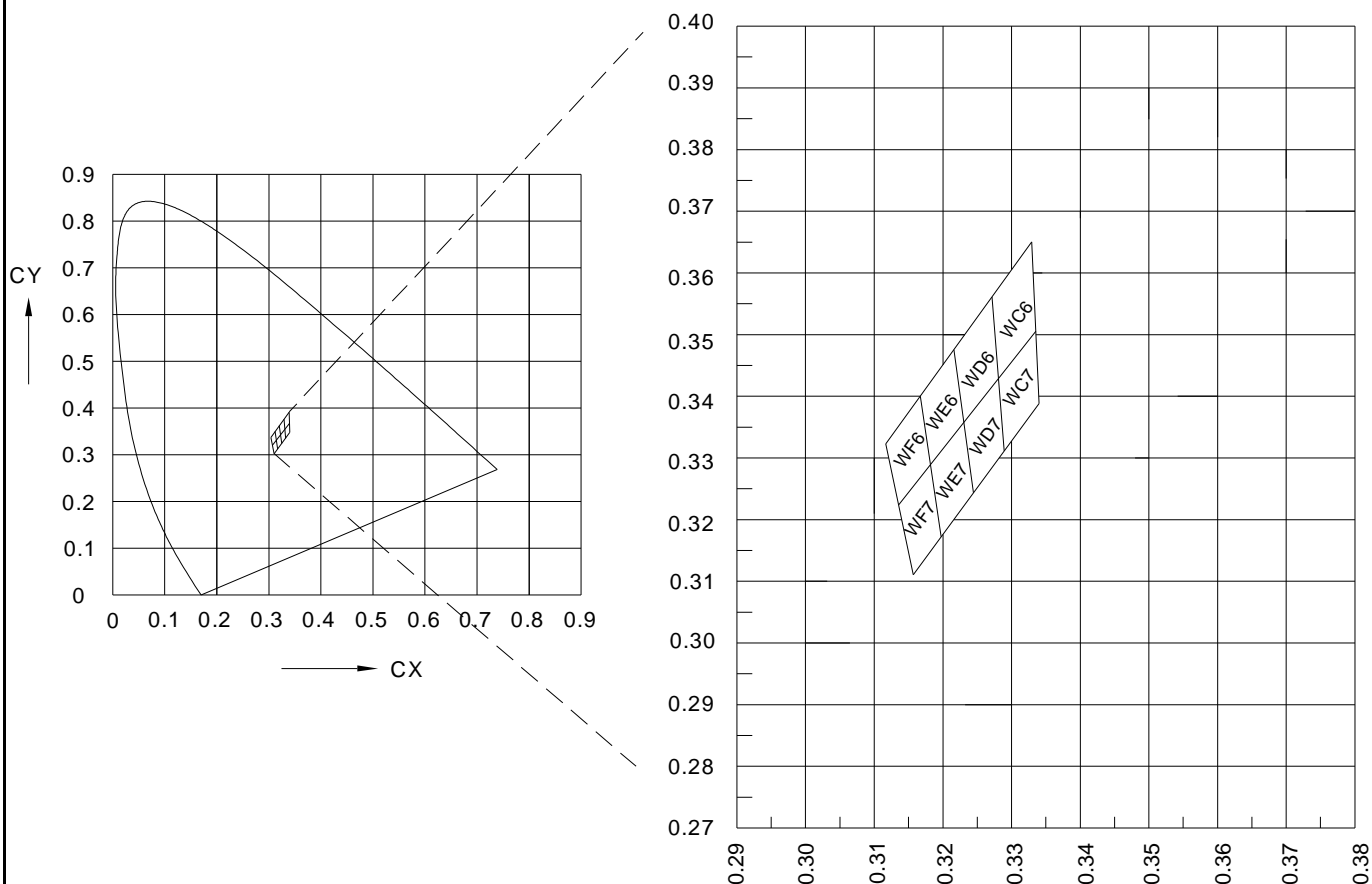
### Chromaticity Coordinates Specifications for Bin Grading:

COLOR RANKS (IF=700mA, Ta=25°C)

BIN	RANK					BIN	RANK				
WC6	X	0.3264	0.3327	0.3324	0.3268	WC7	X	0.3268	0.3324	0.3324	0.3272
	Y	0.3551	0.3650	0.3519	0.3430		Y	0.3430	0.3519	0.3388	0.3305
WD6	X	0.3210	0.3264	0.3268	0.3218	WD7	X	0.3218	0.3268	0.3272	0.3227
	Y	0.3468	0.3551	0.3430	0.3353		Y	0.3353	0.3430	0.3305	0.3233
WE6	X	0.3164	0.3210	0.3218	0.3175	WE7	X	0.3175	0.3218	0.3227	0.3186
	Y	0.3395	0.3468	0.3353	0.3283		Y	0.3283	0.3353	0.3233	0.3169
WF6	X	0.3122	0.3164	0.3175	0.3136	WF7	X	0.3136	0.3175	0.3186	0.3151
	Y	0.3331	0.3395	0.3283	0.3223		Y	0.3223	0.3283	0.3169	0.3114

Note: X,Y tolerance each Bin limit is  $\pm 0.01$ .

### Chromaticity Coordinates & Bin grading diagram:



### Typical Electrical/Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)

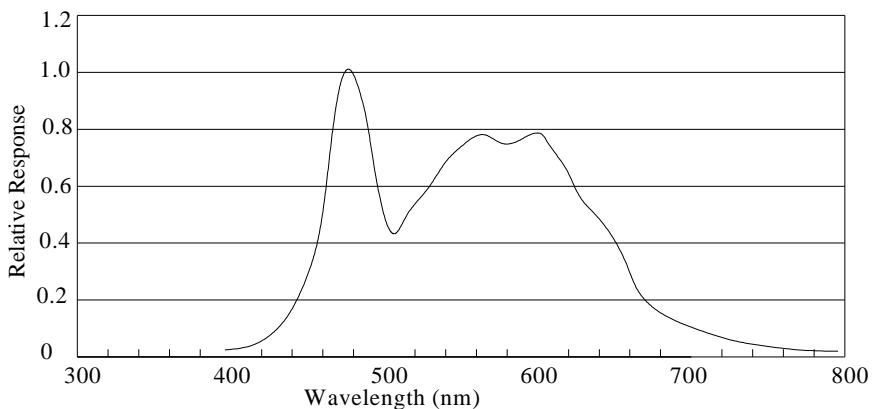
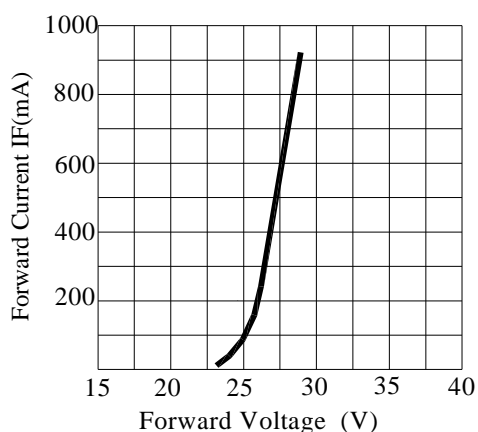
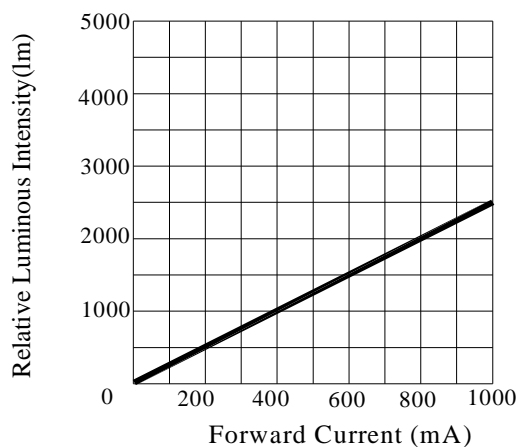


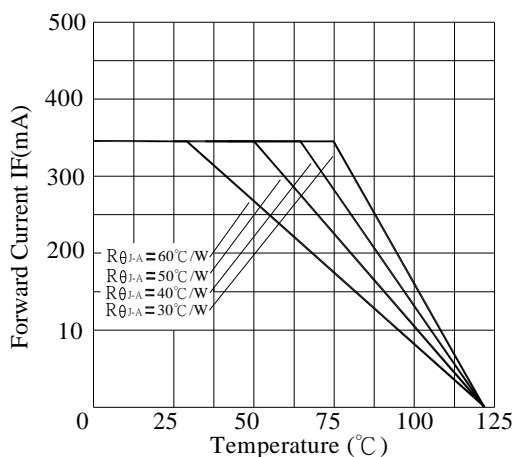
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



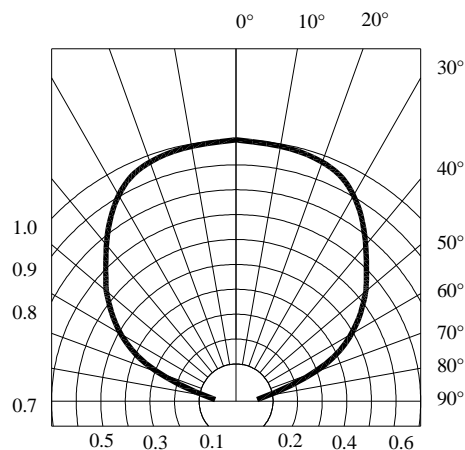
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

## 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**

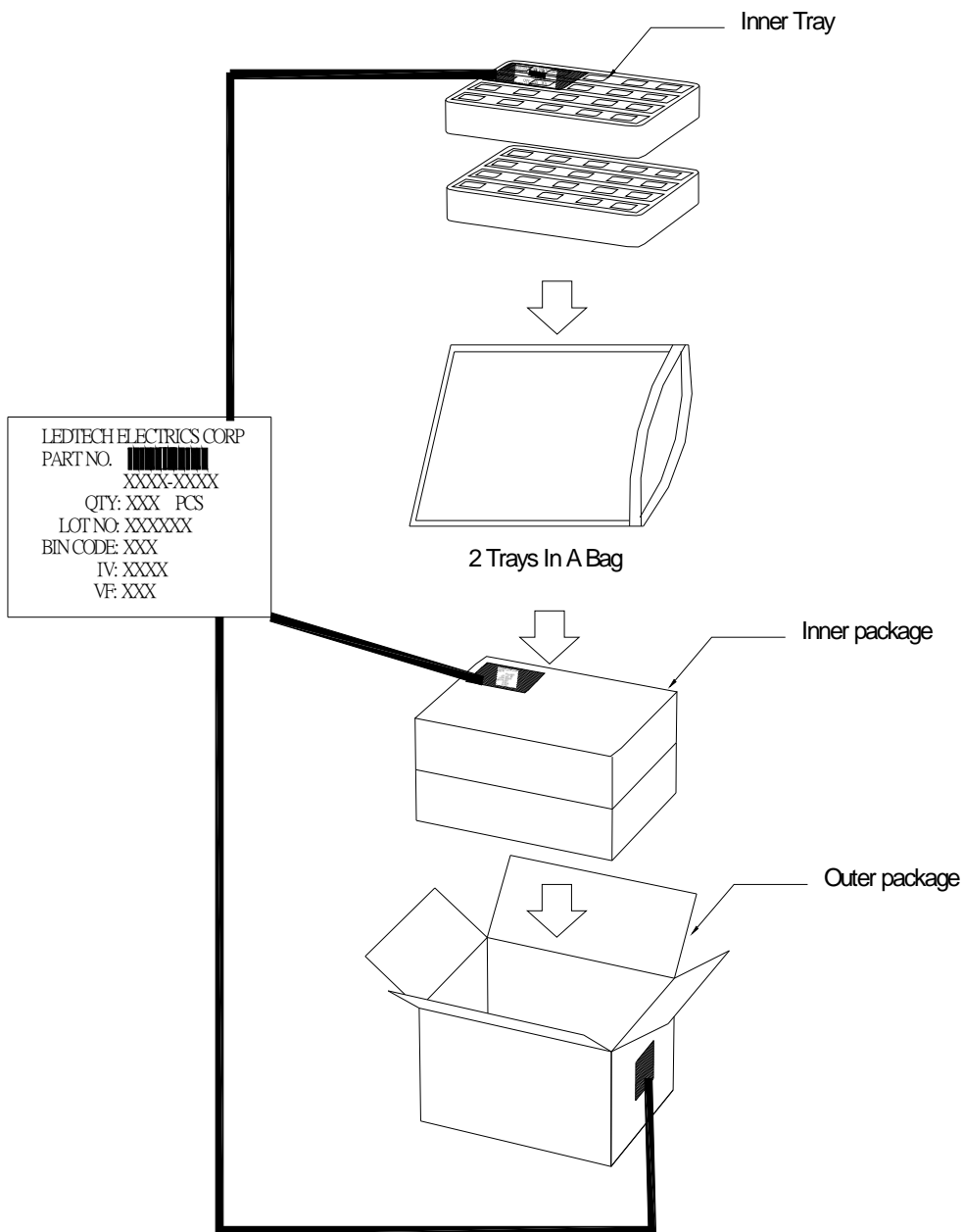
In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.



**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.

**Packaging :****Notes :**

1. All dimensions are in mm.
2. There are 12pcs in a tray.
3. There are 2 trays in an inner box.
4. There are 2 inner boxes in an outer box.