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# SPECIFICATION

*PART NO. : LP30N3-S555*

*60W COB 60 x 60mm TYPE*



Approved by

Checked by

Prepared by

*Kj*

*Lian*

*Yong*



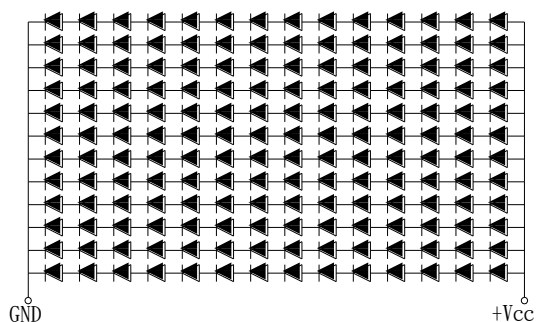
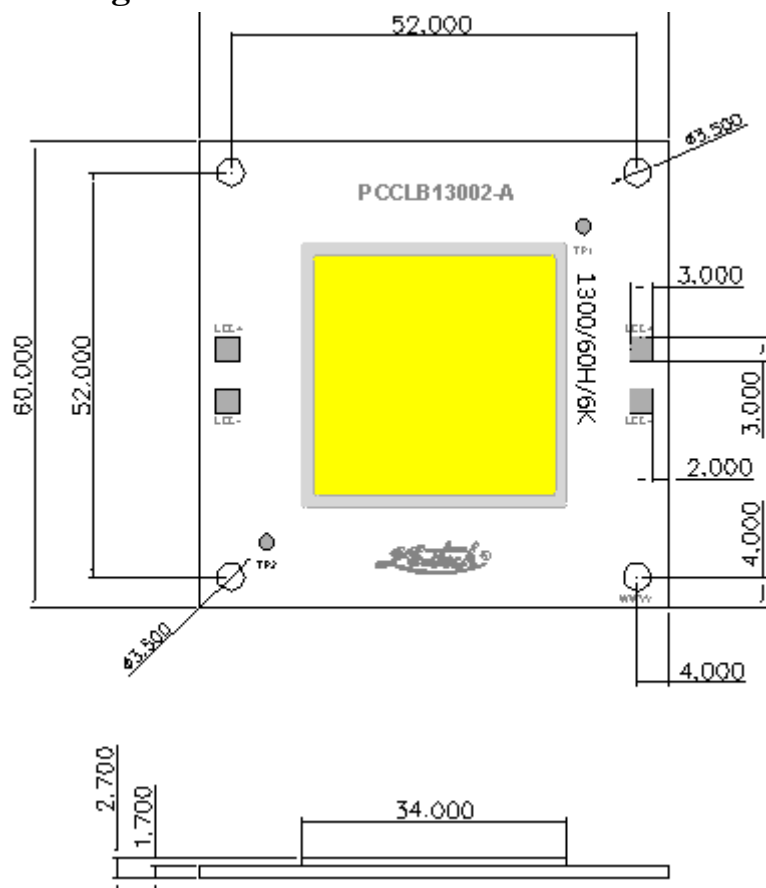
## Features

- 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**



14S / 12P

**Notes:**

1. All dimensions are in mm.
2. Tolerance is  $\pm 0.5$ mm unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without notice.
4. Epistar Chip inside
5. Spraying the code "1300/100H/6K" on substrate of COB

**Description**

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
LP30N3-S555	InGaN/ Sapphire	Cool White	Yellow Diffused

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

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	55.9	W
D.C. Forward Current	I <sub>f</sub>	1.3	A
LED Junction Temperature	T <sub>j</sub>	150	°C
Operating Temperature Range	T <sub>opr.</sub>	-40 to +110	°C
Storage Temperature Range	T <sub>stg.</sub>	-40 to +120	°C
Solder Heat Resistance	SHR	Hand Soldering: 260±5°C for 5 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

**Electrical and Optical Characteristics :**

Parameter	Symbol	Condition	Values			Units	
			Min.	Typ.	Max.		
Luminous Flux	Φ <sub>v</sub>	I <sub>f</sub> =1.3A		7540		lm	
			Rank 29	7270	--		7800
			Rank 30	7800	--		8900
Forward voltage	V <sub>F</sub>	I <sub>f</sub> =1.3A		42.25		V	
			Rank V1	41	--		43
Efficiency	η	I <sub>f</sub> =1.3A	130	-	-	lm/W	
Correlated Colour Temperature	CCT	I <sub>f</sub> =1.3A	5500	--	6000	K	
CIE Chromaticity Coordinates: X Axis	X	I <sub>f</sub> =1.3A	--	0.3268	--		
CIE Chromaticity Coordinates: Y Axis	Y	I <sub>f</sub> =1.3A	--	0.343	--		
Reverse Current	I <sub>R</sub>	V <sub>r</sub> =56V	--	--	100	μA	
Color Renderig Index	CRI	I <sub>f</sub> =1.3A	72	--	--	Ra	
Viewing angle at 50% IV		201/2	--	120	--	Deg.	

## Notes:

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

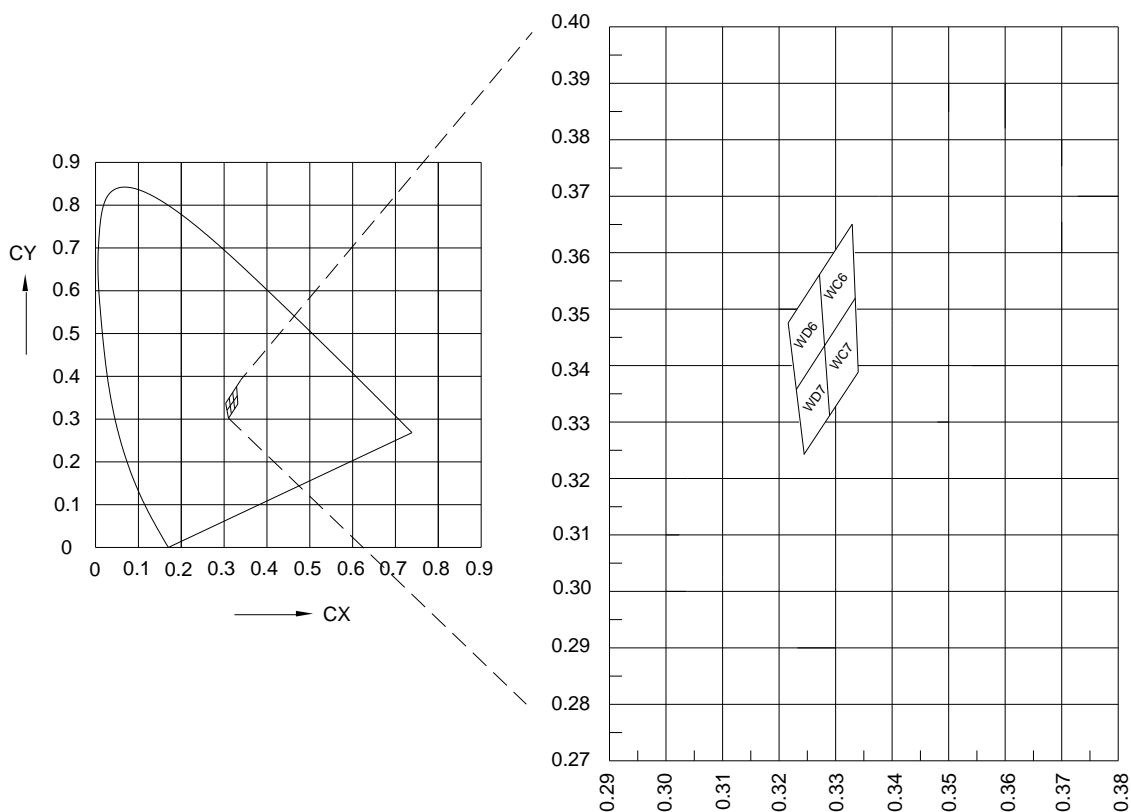
### Chromaticity Coordinates Specifications for Bin Grading:

COLOR RANKS (IF=1.3A.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

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

### Chromaticity Coordinates & Bin grading diagram:



**Typical Electrical/Optical Characteristic Curves**

(25°C Ambient Temperature Unless Otherwise Noted)

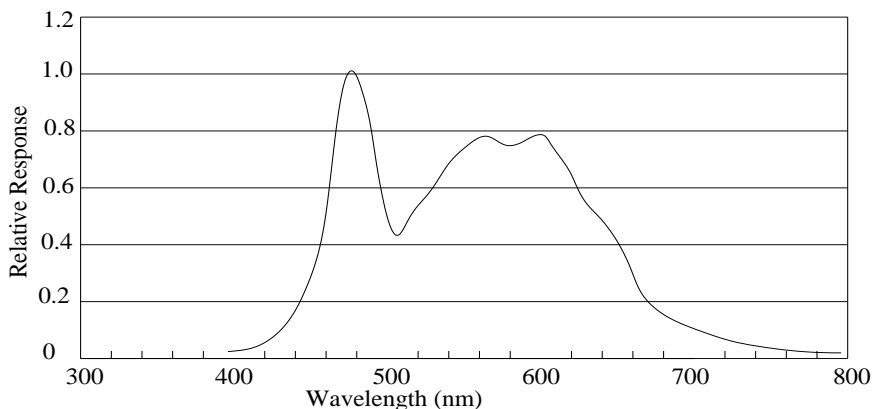
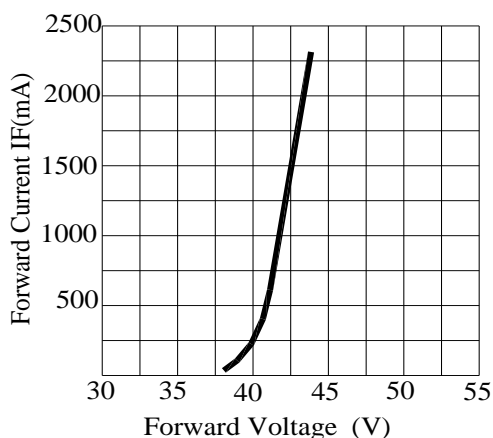
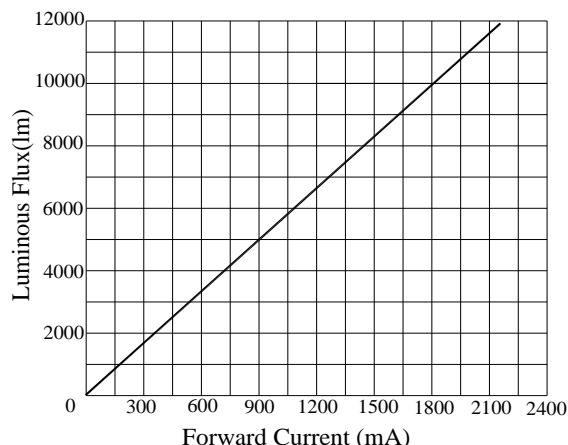


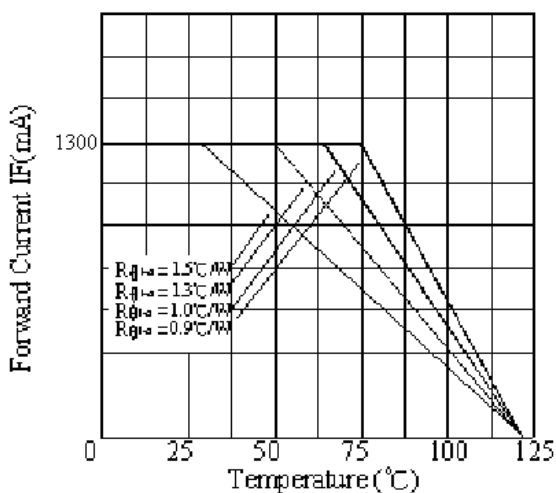
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



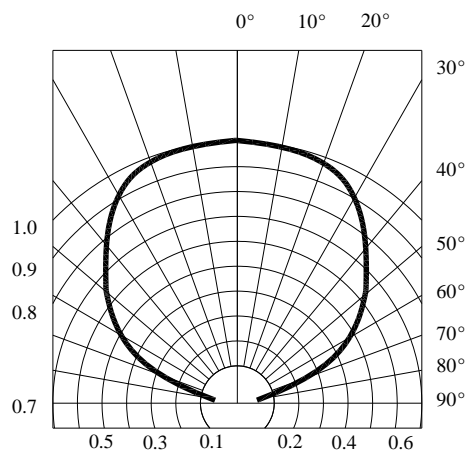
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

## Handling of Silicone Resin LEDs

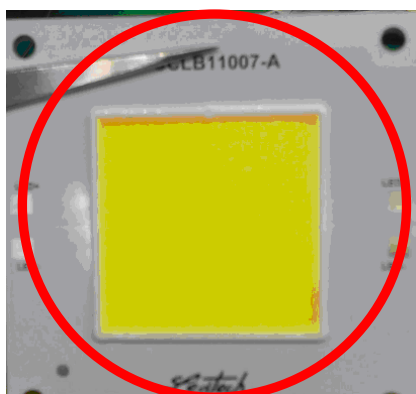
### Handling Indications

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.



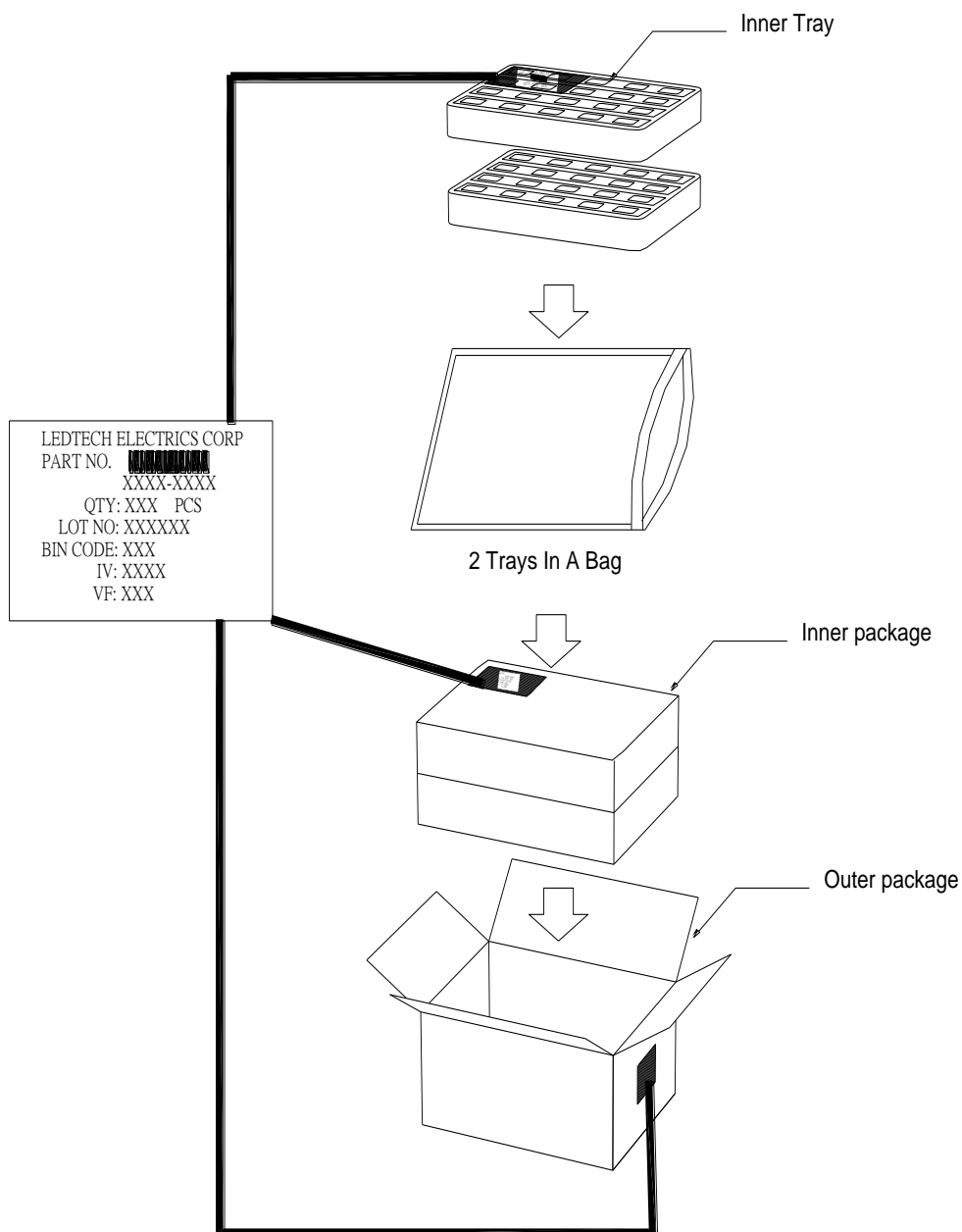
**Figure 2**

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.

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**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 3 inner boxes in an outer box.