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# SPECIFICATION

*PART NO. : LP30N3-S003*

**7W HIGH POWER LED**



Approved by

Checked by

Prepared by

*Gary*

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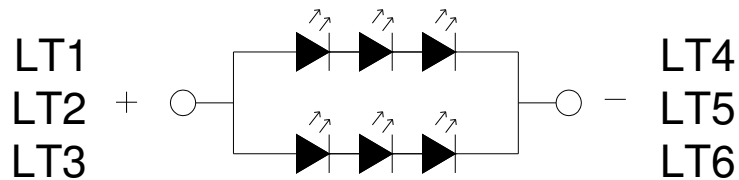
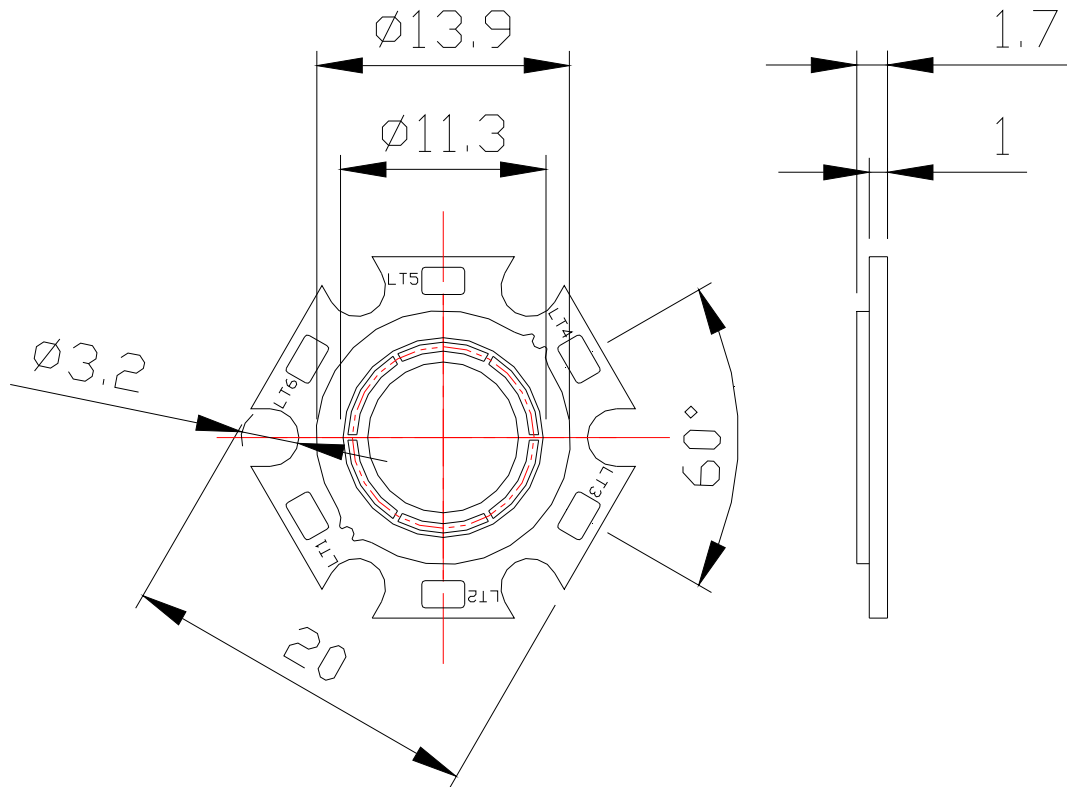
### Features

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

### Application

- Bulb
- Indoor decoration lighting
- Signal and symbol luminaries
- Reading lights
- Portable flashlight

**Package Dimensions**



**Notes:**

1. All dimensions are in mm.
2. Tolerance is +/-0.6mm unless otherwise noted.

**Description**

Part NO.	LED Chip		Lens Color
	Material	Color Coordinates	
LP30N3-S003	InGaN/Sapphire	White	Yellow Diffused

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

Parameter	Symbol	Rating	Unit
Power Dissipation ★	Pd	1260	mW
LED Junction Temperature★	Tj	120	°C
Reverse Voltage ★	Vr	5	V
D.C. Forward Current ★	If	350	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) ★	If(Peak)	1000	mA
Storage Temperature Range	Tstg.	-40 to +85	°C
Soldering Temperature	Tsld.	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM) ★	ESD	300	V

★ The value are based on 1 die performance.

**Electrical and Optical Characteristics :**

Parameter	Symbol	Condition	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	--	IF=700mA	450	550	--	lm
	Rank L1		450	--	550	
	Rank L2		550	--	700	
Forward voltage	--	IF=700mA	--	9.5	--	V
	Rank V1		9.00	--	9.50	
	Rank V2		9.51	--	10.0	
	Rank V3		10.01	--	10.5	
Correlated Colour Temperature	CCT	IF=700mA	5250	5750	--	K
CIE Chromaticity Coordinates: X Axis	X	IF=700mA	--	0.3287	--	
CIE Chromaticity Coordinates: Y Axis	Y	IF=700mA	--	0.3417	--	
Reverse Current	IR	Vr=5V	--	--	50	μA
Color Renderig Index	CRI	IF=700mA	--	72	--	Ra
Viewing angle at 50% IV		2θ1/2	--	120	--	Deg.
Thermal Resistance Junction to Case		Rθj-c	--	15	--	°C/W

**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)

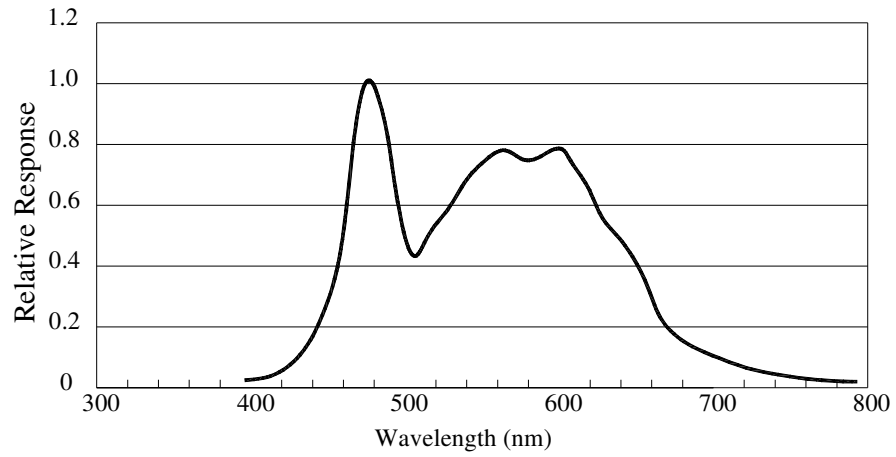
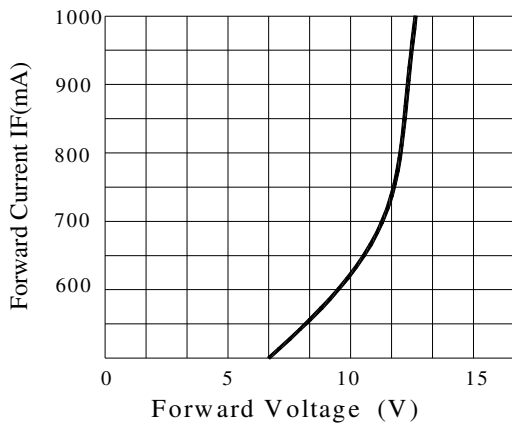
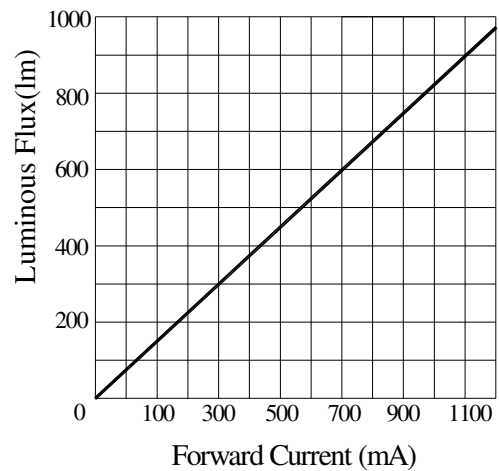


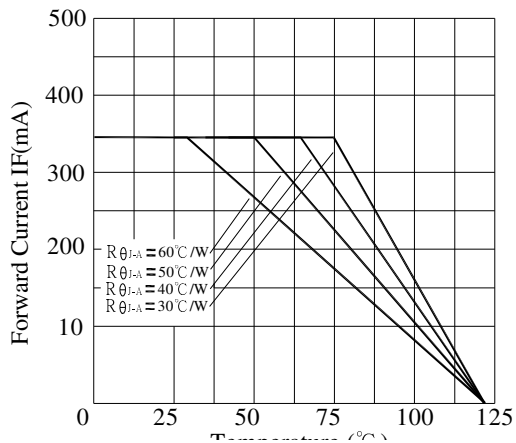
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



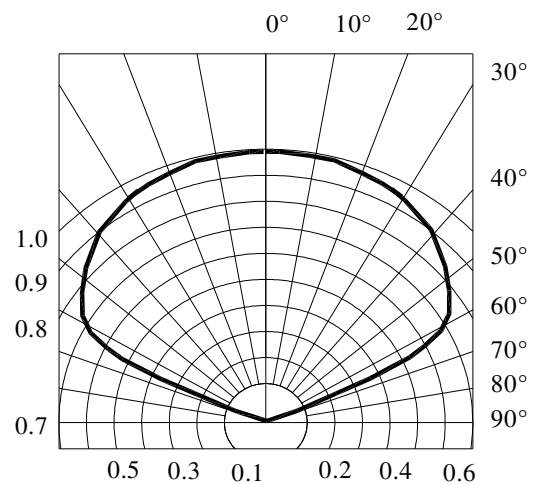
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Flux



Ambient Temperature VS. Forward Current



Radiation Diagram

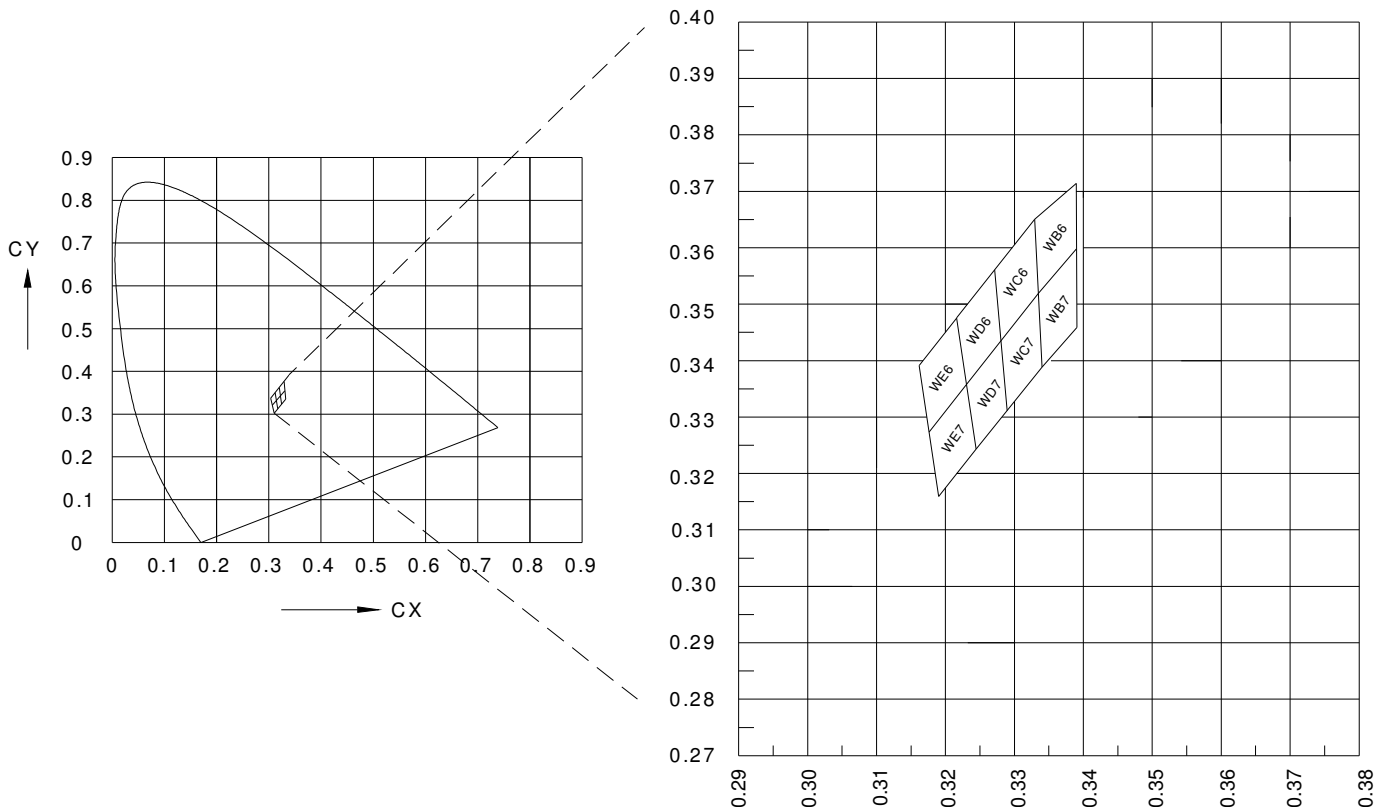
### Chromaticity Coordinates Specifications for Bin Grading:

COLOR RANKS (IF=700mA, Ta=25°C)

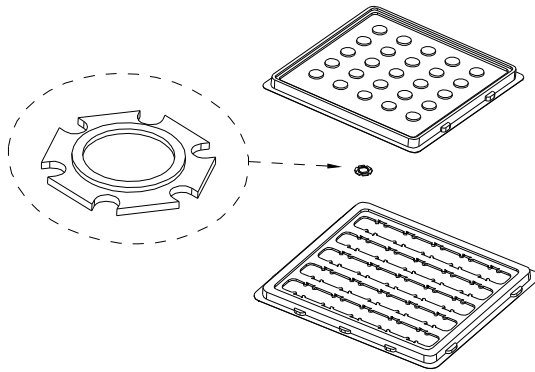
BIN	RANK					BIN	RANK				
WB6	X	0.3327	0.3394	0.3390	0.3324	WB7	X	0.3324	0.3390	0.3385	0.3324
	Y	0.3650	0.3719	0.3591	0.3519		Y	0.3519	0.3591	0.3465	0.3388
WC6	X	0.3264	0.3327	0.3324	0.3268	WC7	X	0.3268	0.3324	0.3324	0.3272
	Y	0.3551	0.3650	0.3519	0.3430		Y	0.3430	0.3519	0.3388	0.3305
WD6	X	0.3210	0.3264	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

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

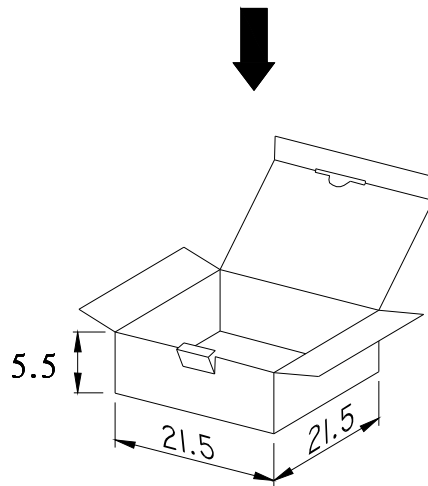
### Chromaticity Coordinates & Bin grading diagram:



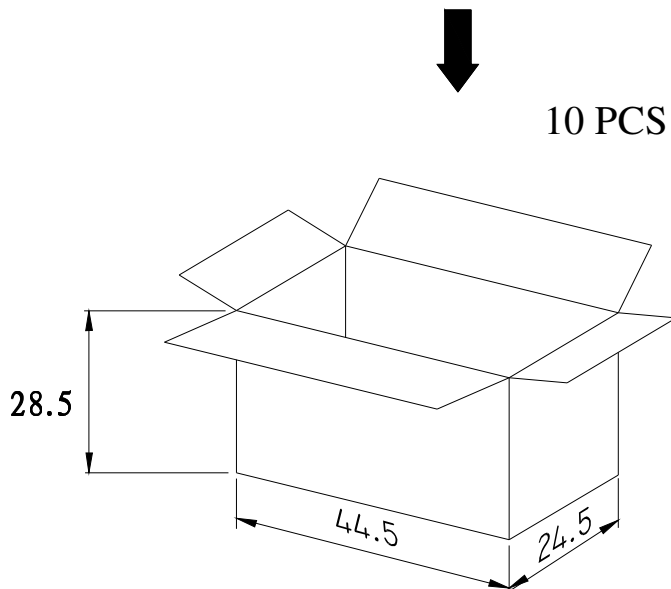
**Tray packaging**



25 PCS LED / 1 TRAY



4 PCS TRAY / 1 INNER BOX



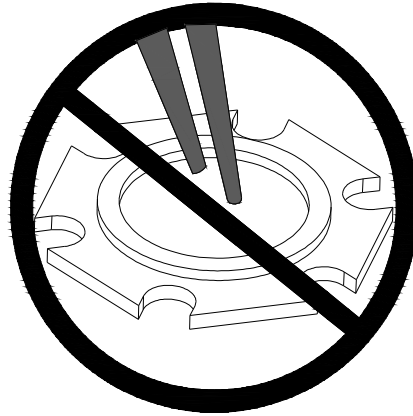
10 PCS INNER BOX / 1 OUTER BOX

UNIT : cm

## Handling of Silicone Resin LEDs

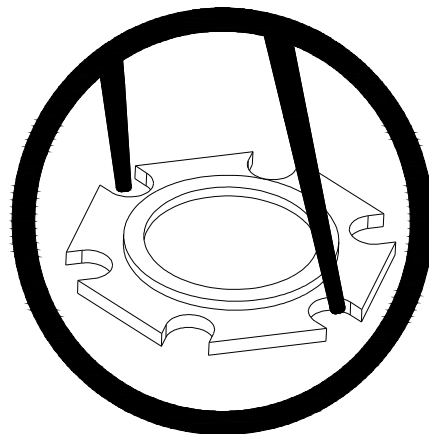
### Handling Indications

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.