

# 5W High Power LED



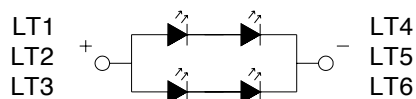
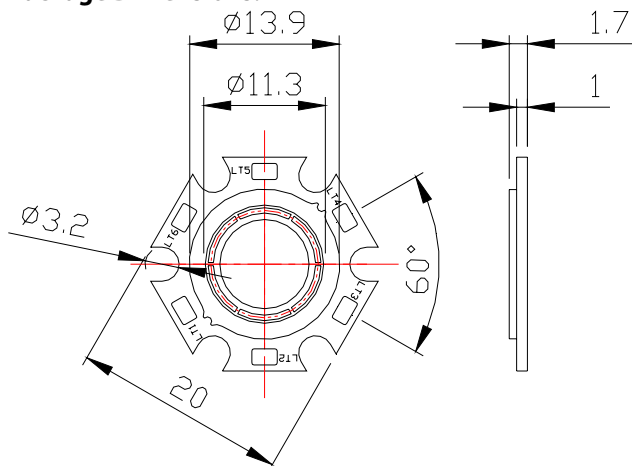
## Features:

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

## Applications:

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

## Package Dimensions:



\* All dimensions are in mm  
\* Tolerance:  $\pm 0.6$ mm

Ant Part No.	LED Chip		Lens Colour
	Material	Colour Coordinates	
703-0116	InGaN/Sapphire	White	Yellow diffused

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## Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation*	P <sub>D</sub>	1260	mW
LED Junction Temperature*	T <sub>j</sub>	120	°C
Reverse Voltage*	V <sub>r</sub>	5	V
D.C. Forward Current*	I <sub>f</sub>	350	mA
Peak Current (1 / 10 Duty Cycle, 0.1ms Pulse Width)*	I <sub>f</sub> (Peak)	1000	mA
Storage Temperature Range	T <sub>stg.</sub>	-40 to +85	°C
Soldering Temperature (1.6mm from body)	T <sub>sld.</sub>	Dip Soldering: 260°C for 10sec. Hand Soldering: 350°C for 3sec.	
Electric Static Discharge Threshold (HBM)*	ESD	300	V

\* The values are based on 1 die performance.

## Electrical & Optical Characteristics:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Luminous Flux	Φ <sub>v</sub>	I <sub>F</sub> =1050mA	300	400		lm	
			Rank L1	300			400
			Rank L2	400			450
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1050m		6.50		V	
			Rank V1	6.00			6.50
			Rank V2	6.51			7.00
Correlated Colour Temperature	CCT	I <sub>F</sub> =1050mA	5250	5750		K	
CIE Chromaticity Coordinates: X Axis	X	I <sub>F</sub> =1050mA		0.3287			
CIE Chromaticity Coordinates: Y Axis	Y	I <sub>F</sub> =1050mA		0.3417			
Reverse Current	I <sub>R</sub>	V <sub>r</sub> =5V			50	μA	
Colour Rendering Index	CRI	I <sub>F</sub> =1050mA		72		Ra	
Viewing Angle at 50%				2θ ½	120	Deg	
Thermal Resistance Junction to Case		Rθ <sub>J-C</sub>		15		°C / W	

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

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**Typical Electrical & Optical Characteristics Curves:**  
(25°C Ambient temperature unless otherwise noted)

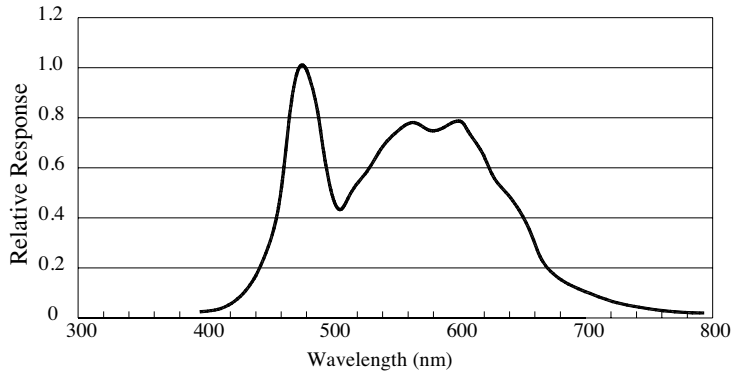
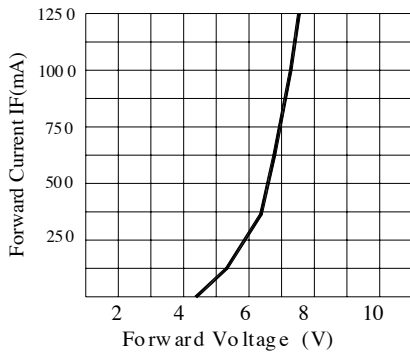
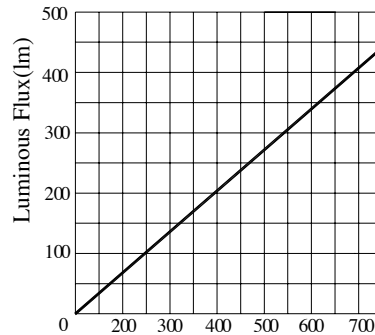


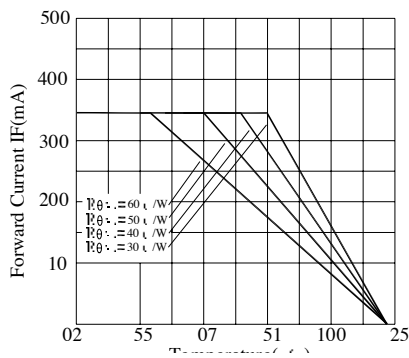
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



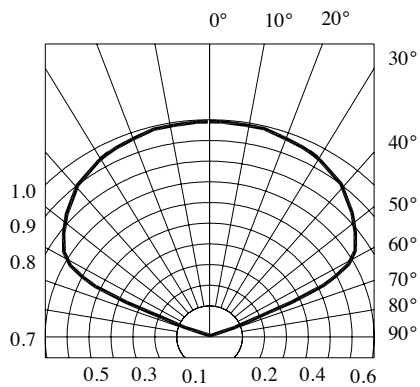
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Flux



Ambient Temperature VS. Forward Current



Radiation Diagram

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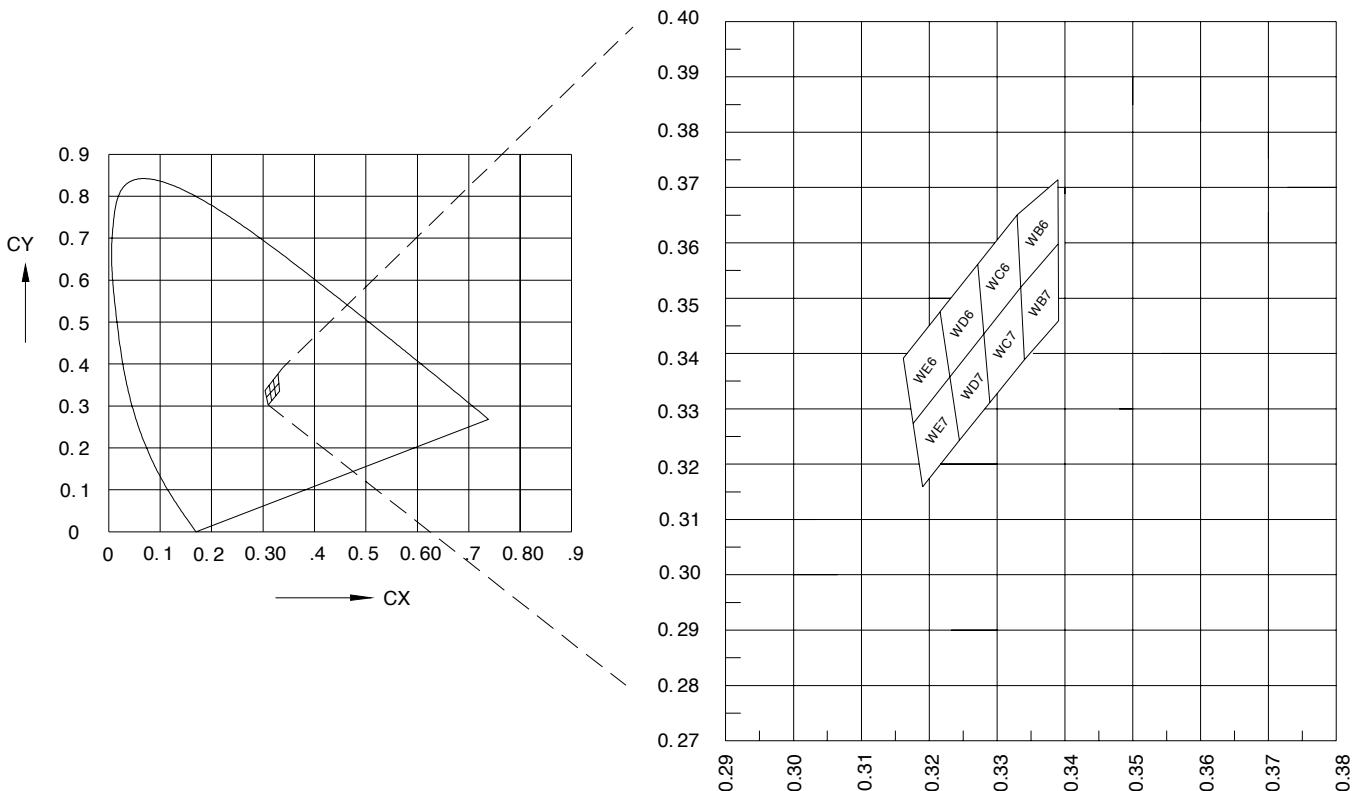


## Chromaticity Coordinates Specifications for Bin Grading:

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:



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