



SHENZHEN GUOYEXING OPTOELECTRONICS CO., LTD.

## SPECIFICATION FOR APPROVAL

Customer: \_\_\_\_\_

Description: \_\_\_\_\_ SMD LED \_\_\_\_\_

Model: \_\_\_\_\_ GYX-SD-HP511 \_\_\_\_\_

Lot No.: \_\_\_\_\_

No.: \_\_\_\_\_ SD-0400468 \_\_\_\_\_

Date: \_\_\_\_\_ 2007-09-27 \_\_\_\_\_

Enclosure is the specification

SHENZHEN GUOYEXING OPTOELECTRONICS CO., LTD.			
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APPROVED SIGNATURES			

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## GYX-SD-HP511

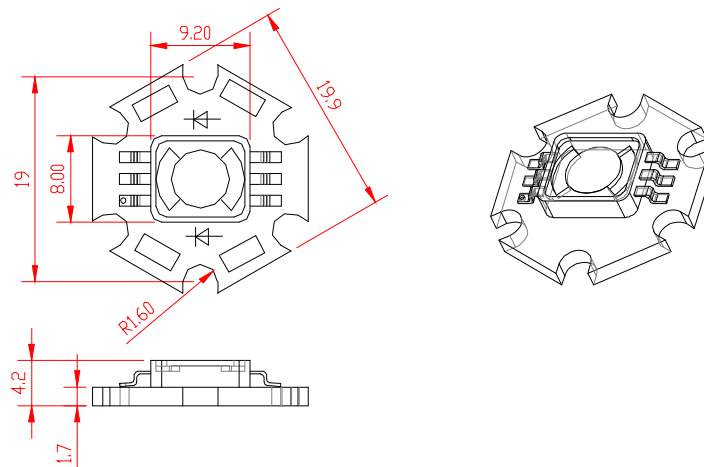
### Features And Applications

- 1) 5W High Power LED.
- 2) Low forward voltage operated.
- 3) Wide viewing angle.
- 4) Long operating life(up to 100,000 hours).
- 5) Istant light(less than 100ns).
- 6) More Energy Efficient than incandescent and halogen lamps.
- 7) No UV.
- 8) Ideal for Indoor and Outdoor Commercial lighting、Uplighters and Downlighters、reading lights、LCD Backlights/Light guides、Portable flashlight、Bollards/Security/Garden lighting and general lighting.
- 9) Various colors and lens types available.

### Description

The White、Red、Amber、TrueGreen、Blue source color devices are made with InGaN、AlGaInP/GaAs、AlGaInP/GaAs、InGaN、InGaN Light Emitting Diode.

### Package Dimensions



viewing angle : 120°

#### Notes:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.1$  unless otherwise noted.
3. Specifications are subject to change without notice.



**Electrical / Optical Characteristics at  $I_F=1400\text{mA}$  ( $T_A=25^\circ\text{C}$ )**

Part Number	Color	Symbol	Parameter	Min.	Typ.	Max.	Units
GYX-SD-HP5110WC	White	Flux	Luminous Flux (白光)	220	240	260	lm
		Flux	Luminous Flux (暖白)	160	170	180	
		$V_F$	Forward Voltage (白光)	3.4	3.7	3.9	V
		$V_F$	Forward Voltage (暖白)	3.4	3.7	3.9	
		CCT	Color Temperature (白光)	5300	5700	6000	K
		CCT	Color Temperature (暖白)	3000	3500	4000	
		$R_{\theta J-B}$	Thermal Resistance Junction to Board	-	20	-	$^\circ\text{C/W}$
		$\Delta V_F / \Delta T$	Temperature Coefficient Of Forward Voltage	-	-2	-	mV/ $^\circ\text{C}$
		$I_R(V_R=5V)$	Reverse Current	-	-	50	$\mu\text{A}$
GYX-SD-HP511SURC	Red	Flux	Luminous Flux	140	150	160	lm
		$V_F$	Forward Voltage	2.2	2.3	2.7	V
		$\lambda_D$	Dominate Wavelength	625	630	635	nm
		$R_{\theta J-B}$	Thermal Resistance Junction to Board	-	20	-	$^\circ\text{C/W}$
		$\Delta V_F / \Delta T$	Temperature Coefficient Of Forward Voltage	-	-2	-	mV/ $^\circ\text{C}$
		$I_R(V_R=5V)$	Reverse Current	-	-	50	$\mu\text{A}$
GYX-SD-HP511SYC	Amber	Flux	Luminous Flux	130	140	150	lm
		$V_F$	Forward Voltage	2.1	2.3	2.5	V
		$\lambda_D$	Dominate Wavelength	590	591	592	nm
		$R_{\theta J-B}$	Thermal Resistance Junction to Board	-	20	-	$^\circ\text{C/W}$
		$\Delta V_F / \Delta T$	Temperature Coefficient Of Forward Voltage	-	-2	-	mV/ $^\circ\text{C}$
		$I_R(V_R=5V)$	Reverse Current	-	-	50	$\mu\text{A}$
GYX-SD-HP511ZGC	True Green	Flux	Luminous Flux	180	190	200	lm
		$V_F$	Forward Voltage	3.4	3.5	3.7	V
		$\lambda_D$	Dominate Wavelength	515	520	525	nm
		$R_{\theta J-B}$	Thermal Resistance Junction to Board	-	20	-	$^\circ\text{C/W}$
		$\Delta V_F / \Delta T$	Temperature Coefficient Of Forward Voltage	-	-2	-	mV/ $^\circ\text{C}$
		$I_R(V_R=5V)$	Reverse Current	-	-	50	$\mu\text{A}$
GYX-SD-HP5110BC	Blue	Flux	Luminous Flux	24	25	27	lm
		$V_F$	Forward Voltage	3.5	3.8	4.1	V
		$\lambda_D$	Dominate Wavelength	465	468	470	nm
		$R_{\theta J-B}$	Thermal Resistance Junction to Board	-	20	-	$^\circ\text{C/W}$
		$\Delta V_F / \Delta T$	Temperature Coefficient Of Forward Voltage	-	-2	-	mV/ $^\circ\text{C}$
		$I_R(V_R=5V)$	Reverse Current	-	-	50	$\mu\text{A}$

Note:

1. Flux is measured with an accuracy of  $\pm 15\%$ .
2. CCT selection acc. To CCT groups and an accuracy of  $\pm 400\text{K}$ .
3. forward Voltage is measured with an accuracy of  $\pm 0.2\text{V}$ .
4. Wavelength is measured with an accuracy of  $\pm 3\text{nm}$ .

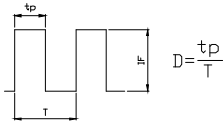


### Absolute Maximum Ratings at TA=25° C

Parameter	Symbol	Rating	Units
DC Forward Current	I <sub>F</sub>	1600	mA
Peak pulse current; (tp≦100us, Duty cycle=0.005)*1	I <sub>pulse</sub>	1600	mA
Reverse Voltage	V <sub>R</sub>	5	V
LED junction Temperature(at1050 mA)	T <sub>j</sub>	125	°C
Operating Temperature	T <sub>opr</sub>	-30~+110	°C
Storage Temperature	T <sub>stg</sub>	-40~+120	°C
Manual Soldering Time at 260° C(Max.)	T <sub>sol</sub>	5	seconds

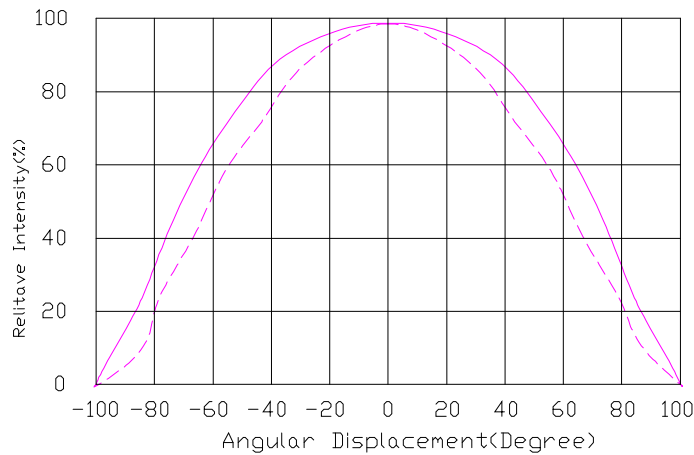
Note:

1. Duty Cycle:



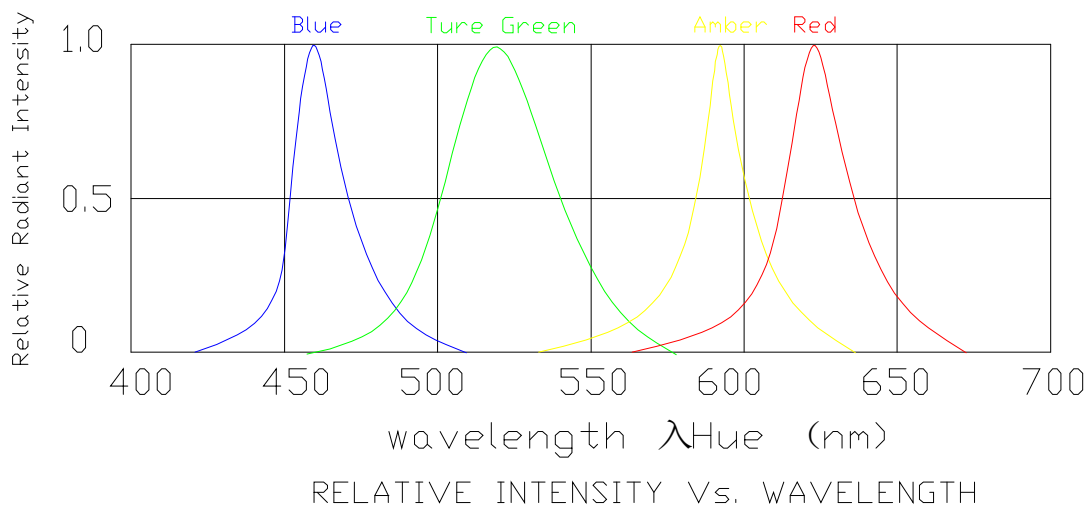
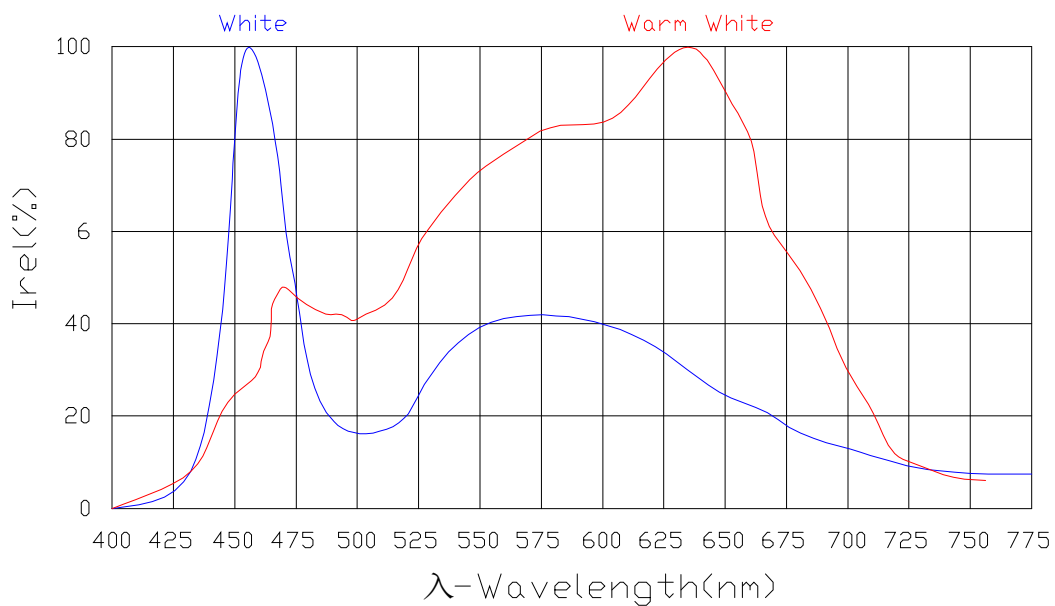
### Typical Radiation Pattern for Lambertian

Typical Radiation Pattern for Lambertian(120°)



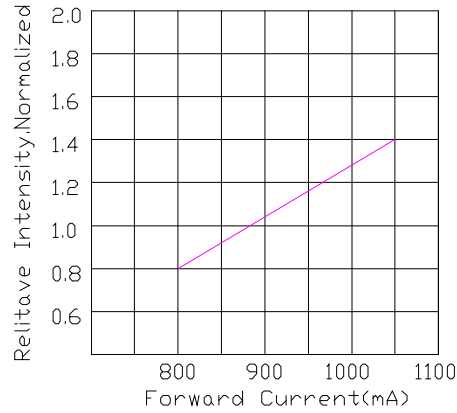


## Electrical & Optical Curves

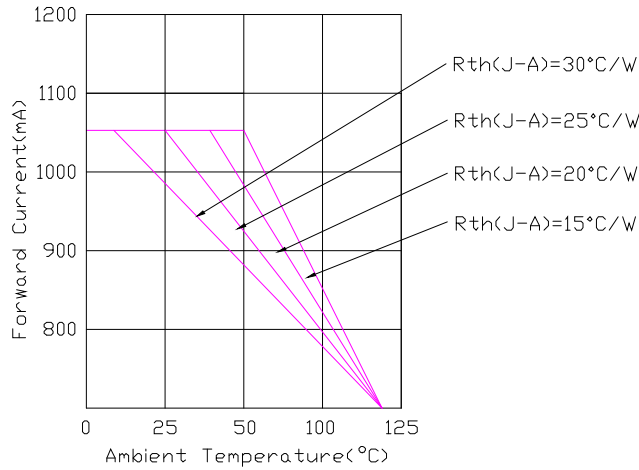




## Current & Luminous Flux



## Operating Current & Ambient Temperature



## Operating Current & Forward Voltage

