

■ Absolute Maximum Ratings (Ta = 25°C) :

**HXGC-3528BC**

Items	Symbol	Absolute maximum Rating	
		Blue/Green/Yellow	Unit
Power Dissipation *	P <sub>D</sub>	100	mW
DC Forward Current	I <sub>F</sub>	20	mA
Peak Pulse Forward Current*	I <sub>FP</sub>	100	mA
Reverse Current	I <sub>r</sub>	10	uA
Reverse Voltage	V <sub>R</sub>	5	V
LED Junction Temperature	T <sub>j</sub>	120	°C
Operating Temperature	T <sub>op</sub>	-30 ~ +60	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature	T <sub>sol</sub>	Max.240°C for 5 sec Max (4mm from the base of the lens )	

\*Pulse width  $\leq$  0.1msec duty  $\leq$  1/10

■ Typical Electrical & Optical Characteristics ( Ta = 25°C):

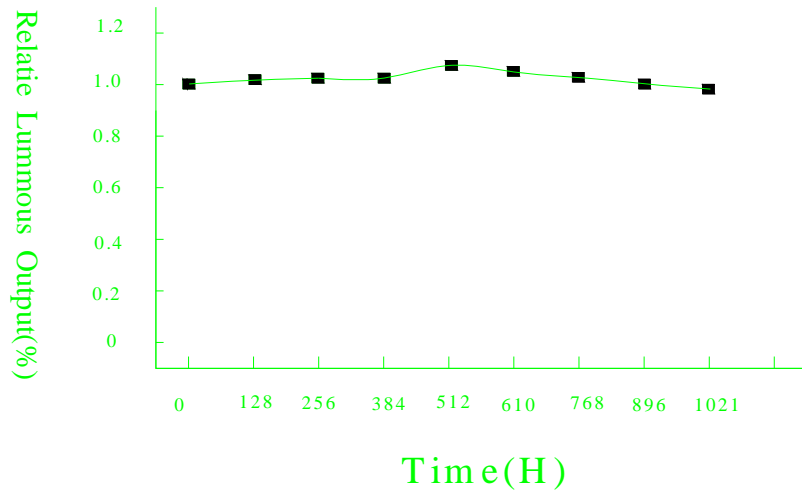
Part No	Color Temperature	Forward Voltage(V)			Test Condition	Viewing Angle (Typ.)	Luminous Flux (lm)	Luminous Intensity (mcd)
		Min.	Typ.	Max.				
HXGC-S3528BC	465-470nm	3.0	3.3	3.6	I <sub>F</sub> = 20mA	120	\	300-500

■ Notes:

- 1.Absolute maximum ratings Ta=25□.
- 2.Tolerance of measurement of forward voltage±0.1V.
- 3.Tolerance of measurement of Luminous Flux ±15%.

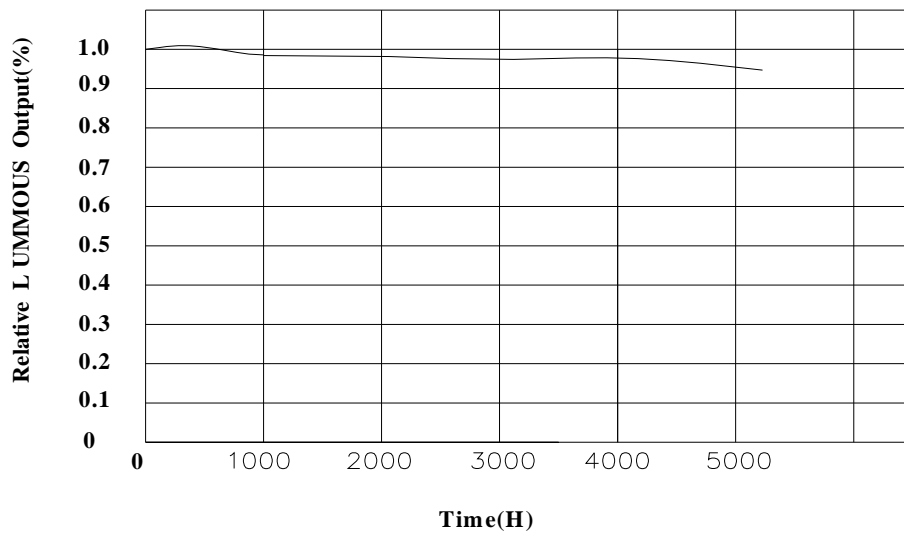
Room Temperature Operating Life Reliability Test Result

(Ta=25°C, If=20mA) Use SSC circuit board & heat sink (Tj=50°C)



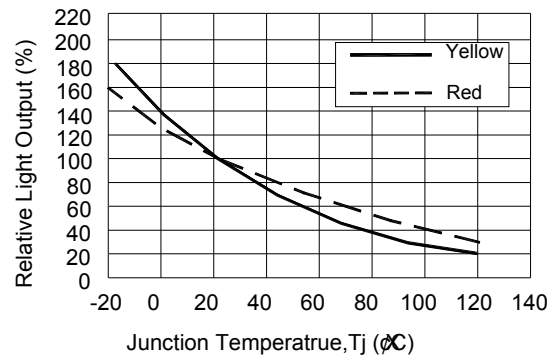
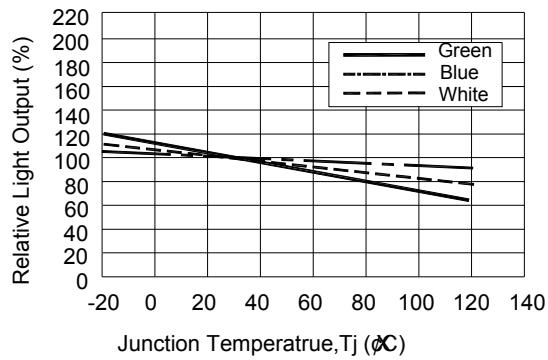
1000HR 2.5% degradation (1000小时衰减2.5%)

Life Time graph

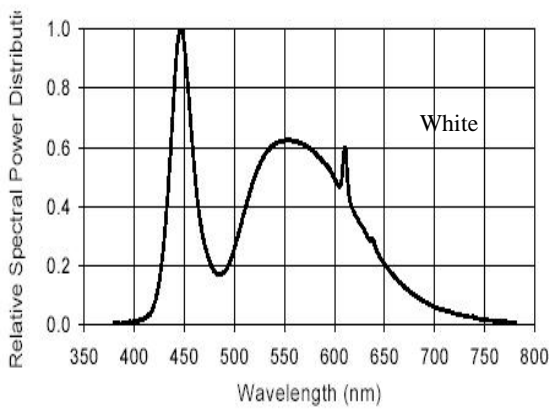


5000HR 5% degradation

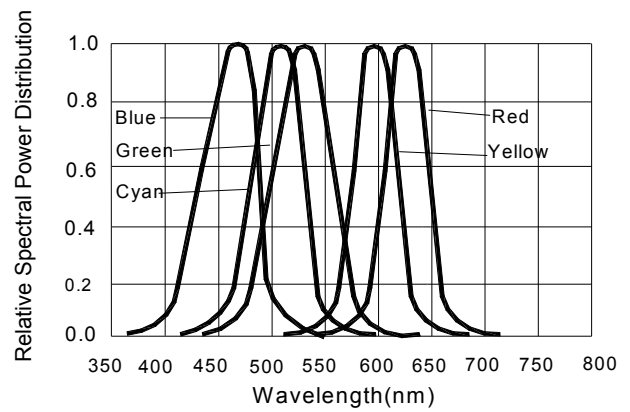
## Light Output Characteristics



## Wavelength Characteristics

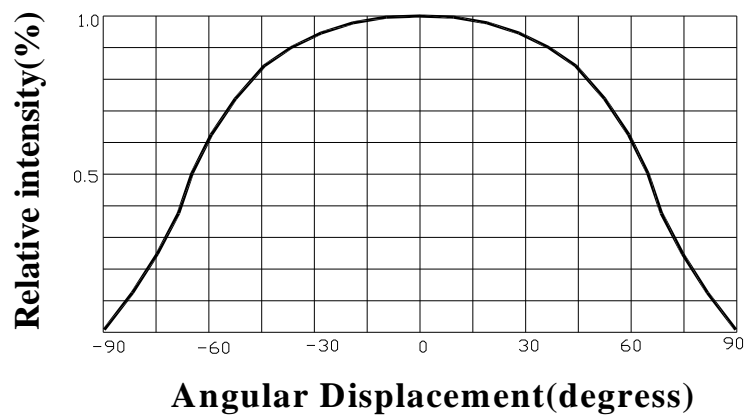


Relative Intensity vs Wavelength (nm)



Relative Intensity vs. Wavelength (nm)

## Typical Representative Spatial Radiation Pattern of single LED



## ■ Reliability

### 1. Test Items And Results

Classification	Test Item	Reference Standard	Test Conditions	Duration	Units Tested	Number of Damaged
Operation Test	Operating Life Test		$T_A=25^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , $I_F=20\text{mA}$	1000 Hrs	22	0/22
Environment Test	High Temperature Storage	JEITA ED-4701 200 201	$T_A=100^{\circ}\text{C}\pm 5^{\circ}\text{C}$	1000 Hrs	22	0/22
	Low Temperature Storage	JEITA ED-4701 200 201	$T_A= - 40^{\circ}\text{C}\pm 5^{\circ}\text{C}$	1000 Hrs	22	0/22
	Temperature. & Humidity Storage		$T_A=85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , $\text{RH}=85\%\pm 5\%\text{RH}$	1000 Hrs	22	0/22
	Thermal Shock	JEITA ED-4701 300 307	$-40^{\circ}\pm 5^{\circ}\text{C} \leftrightarrow +85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 30min dwell / 5 min transfer	50 Cycles	22	0/22
Soldering Test	Solder ability		$240\pm 5^{\circ}\text{C}$ , $5 \pm 1$ sec	1 time Over 95%Wetting	22	0/22
	Resistance to Soldering Heat		$260\pm 5^{\circ}\text{C}$ , $10 \pm 1$ sec	1 time	22	0/22

### 2.Failure criteria

- Electrical Failures:

- $V_F$  shift% >10%
- $I_R(V_R=7V)>1\mu\text{A}$

- Visual Failures:

- Broken or damaged package or lead
- Solder ability < 95% Wetting
- Dimension out of tolerance
- Discolor of lens

■ Note : It is required that the LEDs should be attached heat-sink when these LEDs are Operating.

## Precautions For use

### (一) Storage

In order to avoid absorption of moisture it is recommended that the products are stored in the dry box (or dessicator) with a dessicant. Alternatively the following environment is recommended:

Storage temperature :5°C ~30°C

Humidity:60%HRmax

- (二). Any mechanical force or any excess vibration should be avoided during the cooling process after soldering.
- (三). Components should not be mounted on distorted Printed Circuit Boards.
- (四). Devices should not be used in any type of fluid such as water, oil, organic solvents etc. When cleaning is required, IPA should be used.
- (五). Devices should be soldered within 7 days after opening the moisture-proof packing.
- (六). ESD Precaution .Static Electricity and surge damages LEDs.

It is recommended that wrist bands or anti-electrostatic gloves be used when handling the LEDs. All devices, equipment and machinery should be properly grounded.