

## SPECIFICATION FOR APPROVAL

## 承 认 书

### DESCRIPTION

品 名: light emitting diode

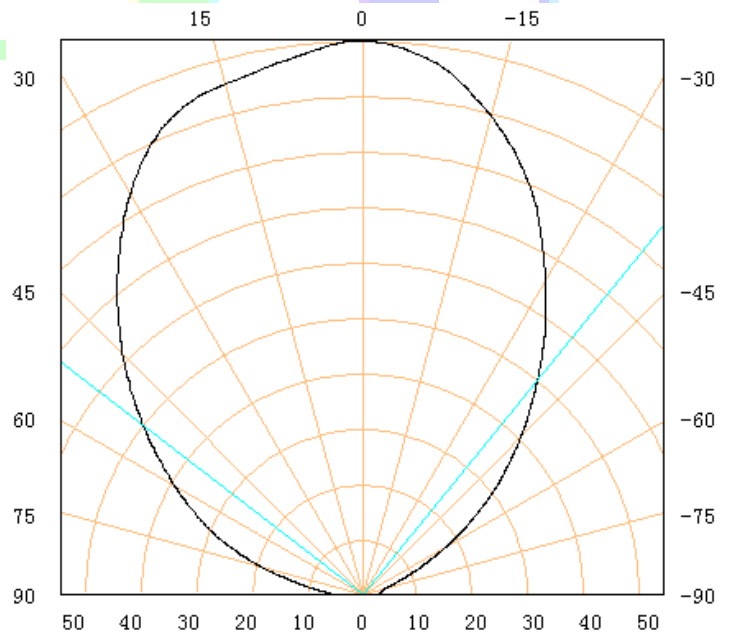
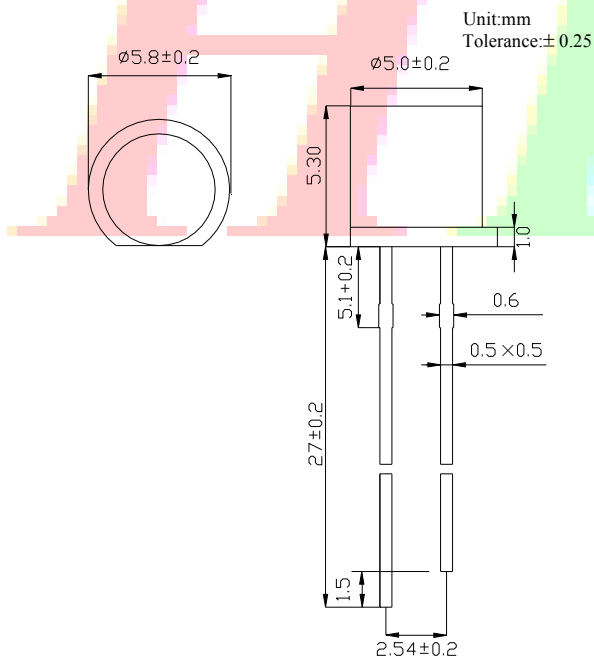
### SPECIFICATION

规 格: Φ5 flat top green tint

### PART NO.

本厂型号: HH-5TC-DGC707-0

Emitter 外型图:

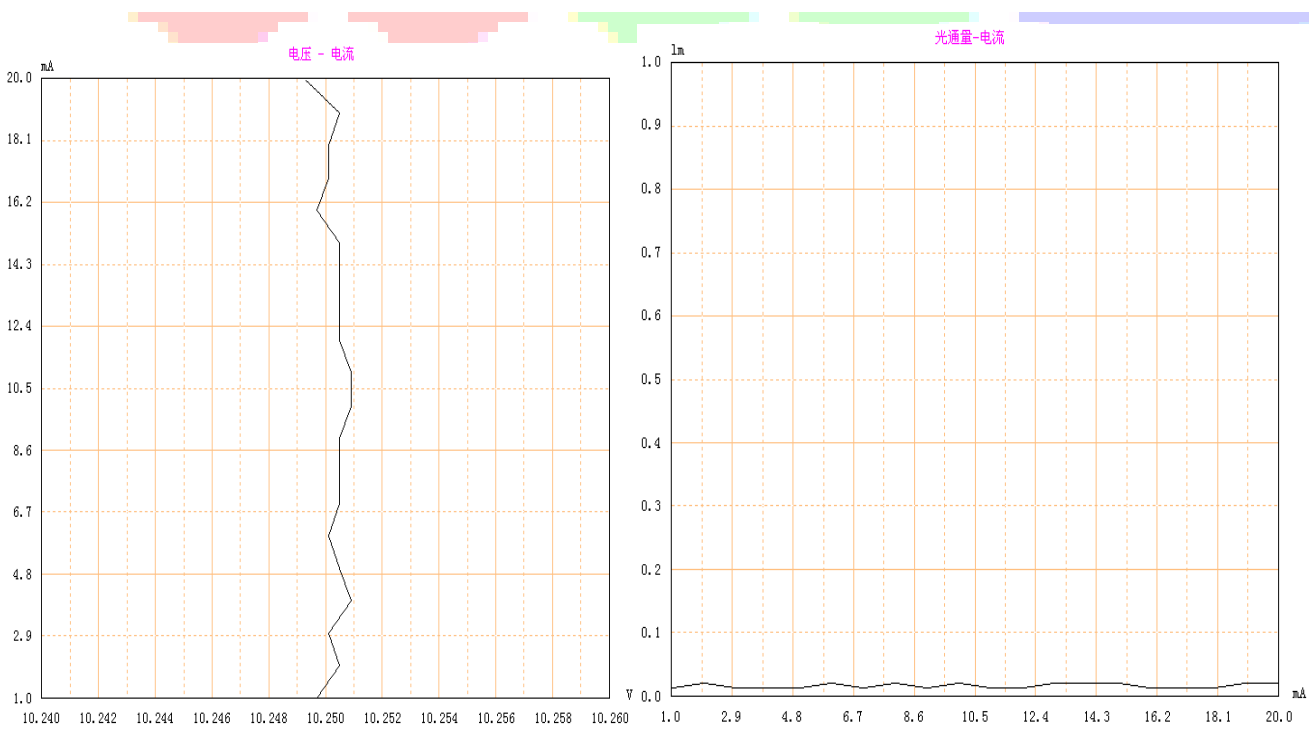
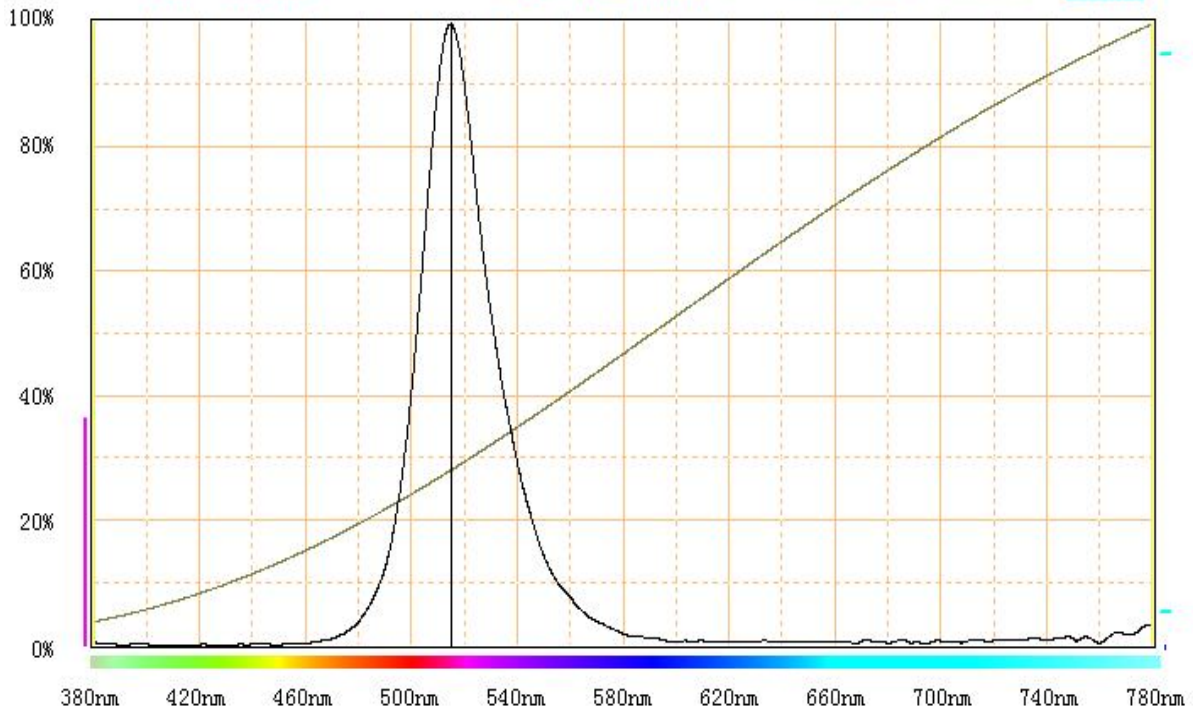


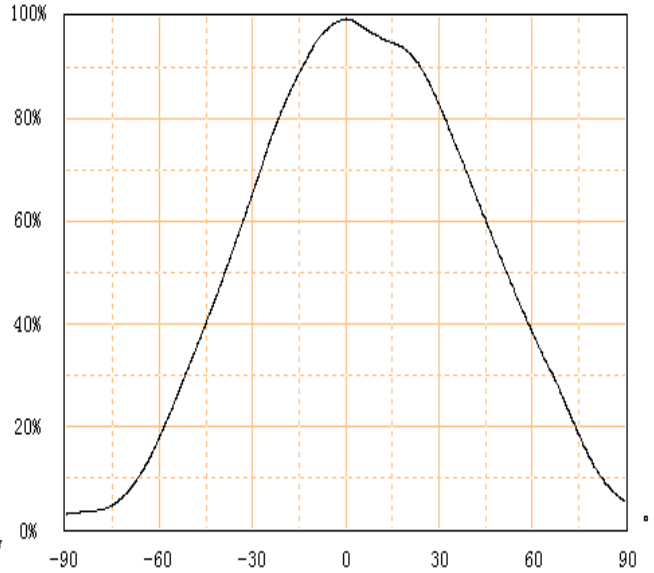
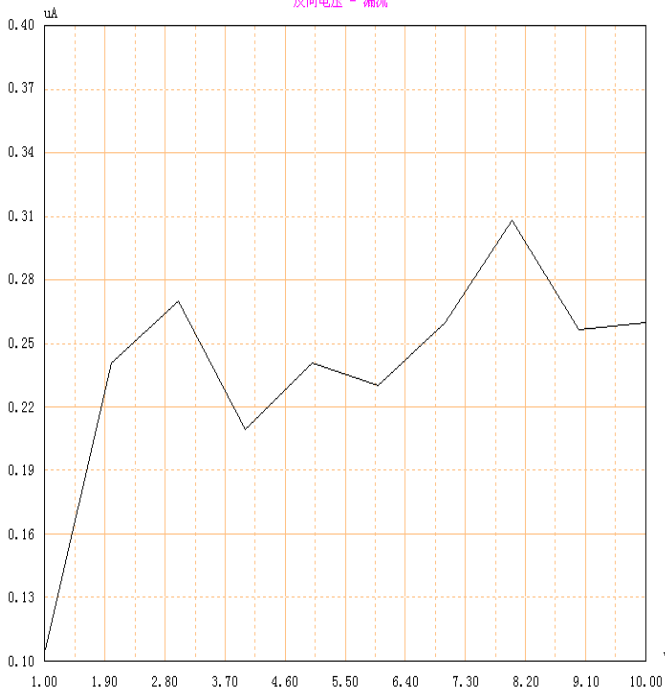
Peak = 515.0nm

光谱功率能量分布P( $\lambda$ )

( 380.0nm , 780.0nm )

色品图





### ■ Absolute Maximum Rating 极限工作参数

Item 项目	Symbol 代号	Absolute Maximum Rating 极限工作参数	Unit 单位
Forward Current 正向电流	IF	20	mA
Peak Forward Current 瞬间脉冲电流	IFP	50	mA
Reverse Voltage 反向电压	VR	5	V
Power Dissipation 消耗功率	PD	100	mw
Electrostatic discharge 静电释放	ESD	1000	V
Operation Temperature 工作温度范围	TOPR	-25~+80	°C
Storage Temperature 存放温度范围	TSTG	-40~+80	°C
Lead Soldering Temperature 最高焊接温度	TSOL	330 °C for 3sec Max.	

\*Ifp Conditions: Pulse Wide ≤ 10msec ≤ 1/10

瞬间脉冲电流

\*Tsol Conditions: 3mm from the base of epoxy bulb

最高焊接温度 距胶体 3mm

### ■ Typical Optical/Electrical Characteristics 光电特性参数

Item 项目	Symbol 代号	Condition 测试条件	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Forward Voltage 正向电压	VF	IF=20mA	3.0	3.2	3.4	V

Reverse Current	逆向电流	IR	VR=5V	0	2	5	uA
Light intensity	光强度	IV	IF=20mA	2300	2400	2500	mcd
Viewing Angle	半光全角	2 θ 1/2	IF=20mA			90	deg
Luminous Flux	光通量	Φ	IF=20mA	4.8	5.0	5.2	lm
Wavelength	波长	WLD	IF=20mA	516	518	520	nm
Recommend Forward Current 持续正向电流		IF(rec)	IF=20mA			20	mA

**Notes:**

1. Work absolute ratings Ta=25°C 工作常规值 温度=25°C
2. Tolerance of measurement of forward voltage ±0.1V 正向电压误差范围 ± 0.1V



# LED LAMP RELIABILITY

## ● Test Items And Results

Type	Test Item	REF. Standard	Test Condition	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1997) A-4	-20°C → 25°C → 80°C → 25°C 30mins,5mins,30mins,5mins	100 cycles	0/100
	High Humidity Heat Cycle	JIS C 7021 (1997) A-5	30°C → 65°C 90%RH 24hrs/1cycle	10 cycles	0/100
	High Temperature Storage	JIS C 7021 (1997) B-10	Ta=80°C	1000hrs	0/100
	Humidity Heat Storage	JIS C 7021 (1997) B-11	Ta=60°C RH=90%	1000hrs	0/100
	Low Temperature Storage	JIS C 7021 (1997) B-12	Ta= -30°C	1000hrs	0/100
Operation Sequence	Life Test	JIS C 7035 (1985)	Ta=25°C I <sub>F</sub> =20mA	1000hrs	0/100
	High Humidity Heat Life Test	*	60°C RH=90% I <sub>F</sub> =20mA	500hrs	0/100
	Low Temperature Life Test	*	Ta= -20°C I <sub>F</sub> =20mA	1000hrs	0/100
Destructive Sequence	Resistance to Soldering Heat	JIS C 7021 (1997) A-11	Tsol=260 ± 5°C,10sec (3mm from the base of the epoxy bulb)	1 time	0/20
	Solderability	JIS C 7021 (1997) A-2	Tsol=235 ± 5°C,5sec (Using flux)	1 time (over 95%)	0/20
	Lead Pull/Bend Test	JIS C 7021 (1997)A-11	Load 2.5N (0.25kgf) 0° → 90° → 0° Bending 3 times	No noticeable damage	0/20

\* Refer to reliability test standard specification for in this line.

## ● Criteria for Judging The Damage

Item	Symbol	Test Condition	Criteria for Judgment	
			Min.	Max.
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	---	Initial data x 1.1
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	Initial data x 2.0
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	Initial data x 0.7	---