Adress: YiShida-BaoYicheng technology park ,Guanlan Street , Baoan district , Shenzhen of

China

Tel:0086-755-33693901 Website: www.hanhualed.com.cn Fax: 0086-755-33693906 MSN: hanhualed@hotmail.com Email: admin@hanhualed.com.cn Mobile:86-13510694247

### **SPECIFICATION FOR APPROVAL**

## 承认书

CUSTOMER'S CODE 客户代码:								
	DESCRIPTION 品 名: 发光二极管							
	SPECIFICATION 规 格: Φ5 雾状四脚三色共阳							
	ATE 丝样日期:							
PART NO. 本厂型号: HH-500CRGBC503W-共阳(Diffused )								
REFERENCE No. 档案号:								
NUMBER OF SAMPLE COPY OF ACKNOWLEDGEMENT 承认书份数								
	Approved By Customer	Qualified By	Form Designer					
	客户承认	核 准	制作					

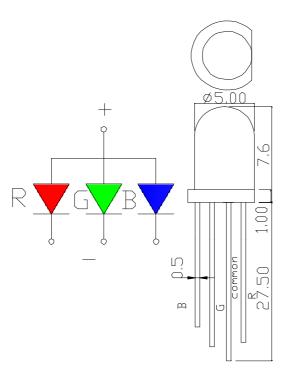
# HE SHEN ZHEN HANHUA OPTO CO.,LTD

Adress: YiShida-BaoYicheng technology park, Guanlan Street, Baoan district, Shenzhen of China

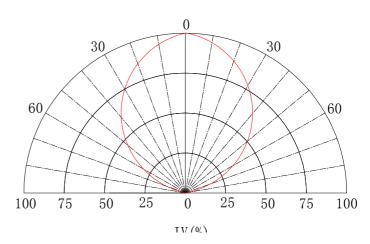
Tel:0086-755-33693901 Website: www.hanhualed.com.cn Fax: 0086-755-33693906 MSN: <a href="mailto:hanhualed@hotmail.com">hanhualed@hotmail.com</a>

Email: admin@hanhualed.com.cn Mobile:86-13510694247

Emitter 外型图:

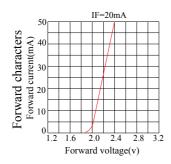


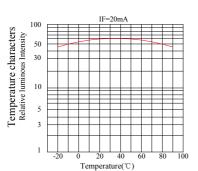
#### Spotial Disttrbution

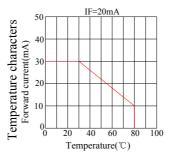


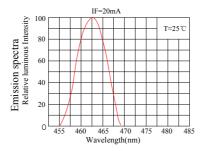
Lens: Diffused

#### Typical electrical-optical Characteristics curvers

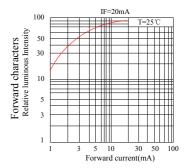








The data are an typical presenlation of the product, Contact customer service for details of technical information and warranty. The product is sensitive to static antistatic operation environment is recommended Products are shipped in either bulk bag package or taping.



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#### ■ 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	
ReverseVoltage	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	<b>-25∼+80</b>	$^{\circ}$ C	
Storage Temperature	存放温度范围	TSTG	<b>-40∼+80</b>	$^{\circ}$	
Lead Soldering Temperatur	e 最高焊接温度	TSOL	330 °C for 3sec Max.		

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

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

Item 项目		Symbol 代号	Condition 件	测试条	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
		VF	IF=20mA	R	1.9	2.0	2.1	V
Forward Voltage	正向电压			G	3.1	3.2	3.3	
				В	3.0	3.1	3.2	
			IV IF=20mA	R	800	900	1200	med
Light intensity	光强度	IV		G	1000	1500	2000	
				В	600	700	800	
		E WD	IF=20mA	R	620	623	625	nm
Wavelength	波长			G	519	520	522	
				В	467	468	470	
Reverse current	逆向电流	IR	IF=20mA		0	/	5	uA
Viewing Angle	半光全角	2 θ 1/2	IF=20mA			65		deg
Recommend Forward Current 持续正向电流		IF(rec)	IF=20mA				20	mA

#### **Notes:**

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

瞬间脉冲电流

<sup>\*</sup>Tsol Conditions:3mm from the base of epoxy bulb 最高焊接温度 距胶体 3mm

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#### LED LAMP RELIABLITY

#### • Test Items And Results

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

<sup>\*</sup> Refer to reliability test standard specification for in this line.

#### • Criteria for Judging The Damage

Itama	Symbol	Test Condition	Criteria for Judgment		
Item			Min.	Max.	
Forward Voltage	$V_{\rm F}$	$I_F = 20 \text{mA}$		Initial data x 1.1	
Reverse Current	$I_R$	$V_R = 5V$		Initial data x 2.0	
Luminous Intensity	Iv	$I_F = 20 \text{mA}$	Initial data x 0.7		