



RoHS

广州亨光电子有限公司

Guangzhou Heng Guang Electronics Co.,Ltd

SPECIFICATION FOR APPROVAL

承认书

CUSTOMER'S CODE

客户代码

DESCRIPTION

品名

发光二极管

SPECIFICATION

规格

5MM 雾状红绿双色共阳

DATE

送样日期

PART NO.

本厂型号

HG-5R9G4SDYANG

REFERENCE NO.

档案号

NUMBER OF SAMPLE

送样数量

COPY OF ACKNOWLEDGEMENT

承认书份数

Approved By Customer 客户承认	Qualified By 核准	Form Designer 制作



HG-5R9G4SDYANG

Lamp LED

Part Number	Chip		Lens Color
	Material	Source Color	
HG-5R9G4SDYANG	InGaN	Red/Green	Milky White



ATTENTION

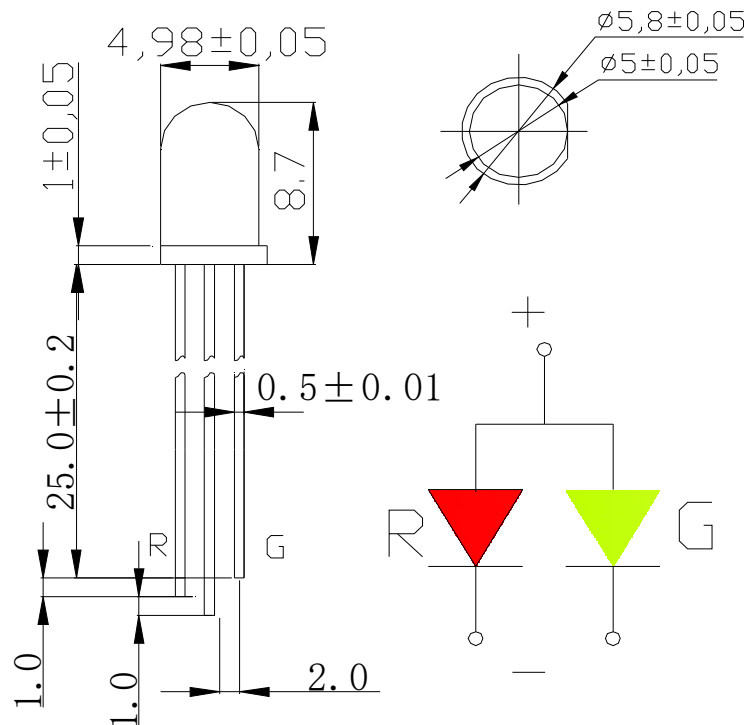


**OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES**

Features

- High brightness red green LED round package
- Light output intensity grade Viewing angle 60 degree
- Epoxy lens color. Milky White
- RoHS compliant

Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.



Absolute Maximum Rating @ Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Continuous Forward Current	IF	20	mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	IFp	50	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD		mW
Electrostatic discharge	ESD	1000	V
Operating Temperature Range	TOPR	-25°C to +80°C	
Storage Temperature Range	TSTG	-35°C to +100°C	
Lead Soldering Temperature (3mm from the base of the epoxy bulb)	TSOL	260°C	

Electrical / Optical Characteristic @ Ta=25°C

Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage	VF	R	2.0	2.2	2.3	V	IF=20mA
		G	2.0	2.2	2.3	V	IF=20mA
Light intensity	IV	R	200		400	mcd	IF=20mA
		G	10		50	mcd	IF=20mA
Dominant Wavelength	Wld	R	620	625	630	nm	IF=20mA
		G	565	570	575	nm	IF=20mA
Reverse Current	IR				1	µA	VR=5V
Viewing Angle	2θ1/2			60		deg	IF=20mA
Recommend Forward Current	IF(rec)	RG			20	mA	

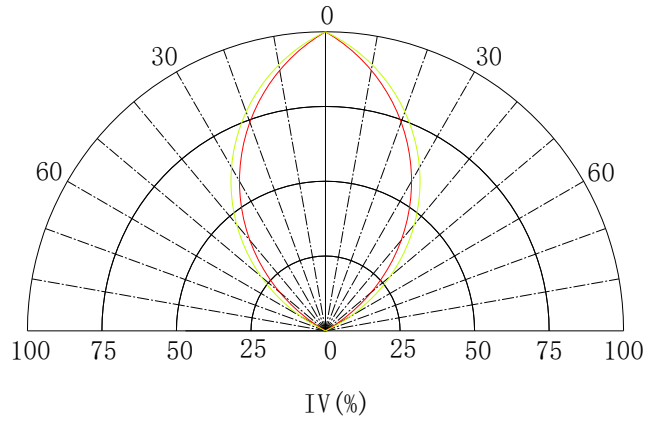
tolerance of measurement of forward voltage $\pm 0.1V$



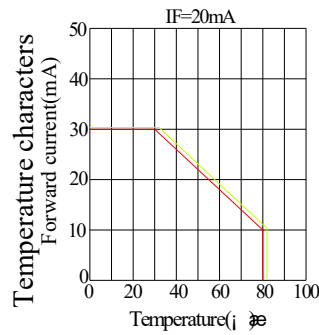
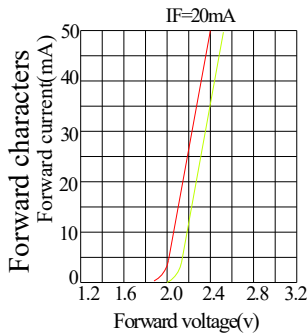
Typical Electrical / Optical Character Curves

(25 ° Ambient Temperature Unless Otherwise Noted)

Spotial Distribution



Typical electrical-optical Characteristics curves

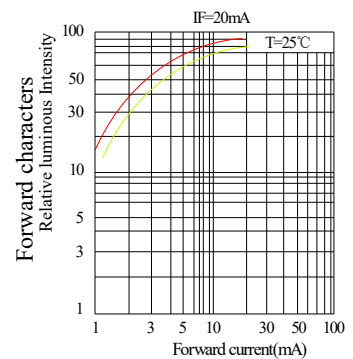
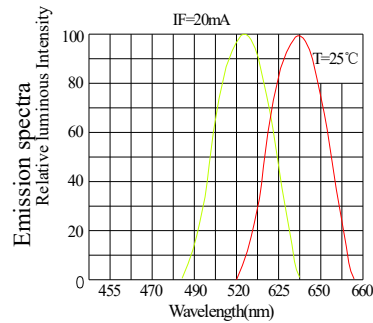
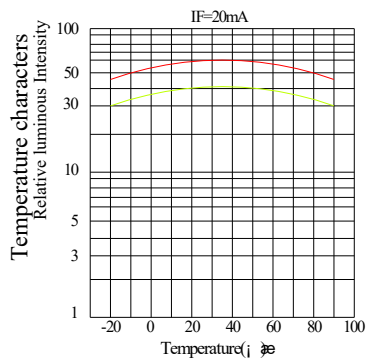


Notes

The data are an typical presentation 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.





Reliability Tests

Type	Test Item	REF Standard	Test Condition	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1997)A-4	-20°C*30mins~25°C *5mins~80°C * 30mins	100 cycles	0/100
	High Humidity Heat Cycle	JIS C 7021 (1997)A-5	30°C→65°C, RH= 90% 24hrs/1cycle	10 cycles	0/100
	High Temperature Storage	JIS C 7021 (1997)B-10	Ta= 80°C	1000h	0/100
	Humidity Heat Storage	JIS C 7021 (1997)B-11	Ta=60°C RH=90%	1000h	0/100
	Low Temperature Storage	JIS C 7021 (1997)B-12	Ta= -30°C	1000h	0/100
Operation Sequence	DC Operating Life	JIS C 7035 (1985)	Ta= 25°C, IF=20mA	1000h	0/100
	High Humidity Heat Life Test	*	Ta=60°C RH=90% IF=20mA	500h	0/100
	Low Temperature Life Test	*	Ta= -20°C, IF=20mA	1000h	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.