



RoHS

# Specification

## 规格书

Customer Name:

客户名称: \_\_\_\_\_

Customer P/N:

客户品号: \_\_\_\_\_

Factory P/N:

公司品号: HL-638U77GD

Sending Date:

送样日期: \_\_\_\_\_

Client approval 客户审核			Hongli approval 鸿利智汇审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
<input type="checkbox"/> Qualified 接受		<input type="checkbox"/> Disqualified 不接受	DATE: 日期:		

Address : Dangui Road NO. 1 Dantu Area Zhenjiang City Jiangsu Province

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注:

- 1.此规格书以中英文方式书写,若有冲突以中文版本为准文本.
- 2.此规格书的最终解释权归属江苏鸿利国泽光电科技有限公司



修订次数	版次	修订内容	修订人	修订日期
1	A/0	新制定规格书	王红	2017/12/17



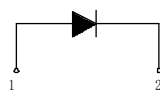
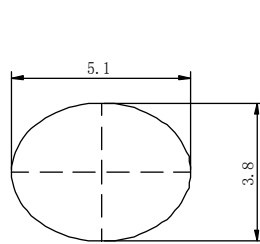
**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



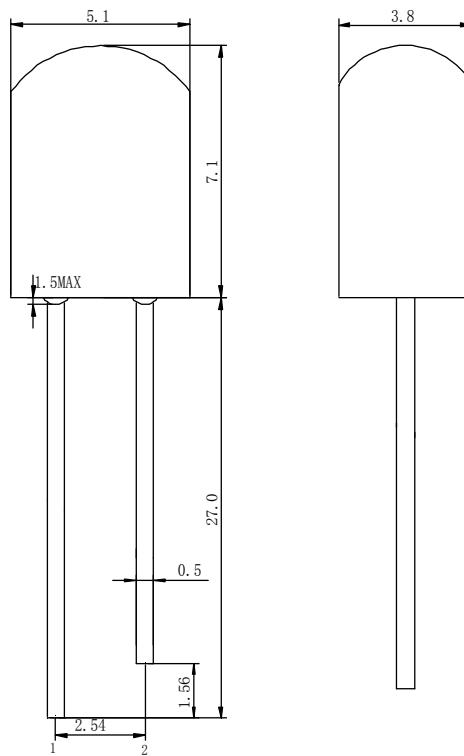
**Features**

- $\phi 5$  OVAL TUPE LAMP LED
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.

**Package Dimensions**



1: ANODE  
2: CATHODE



**Description**

This devices are made with TS InGaN

Tolerance Grade	Dimension Tolerance (UNIT:mm)			
	0.5~3	3~6	6~30	30~120
	$\pm 0.1$	$\pm 0.2$	$\pm 0.3$	$\pm 0.5$
Chip		Lens Color		
Material	Emitting Color	Color Diffused		
InGaN	Green			



■ Absolute Maximum Rating

Item	Symbol	Value	Unit
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current*	I <sub>FP</sub>	120	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	80	mW
Electrostatic discharge	E <sub>SD</sub>	1000	V
Operation Temperature	T <sub>opr</sub>	-30~+80	°C
Storage Temperature	T <sub>stg</sub>	-40~+80	°C
Lead Soldering Temperature*	T <sub>sol</sub>	Max. 260°C for 5sec Max.	

\*I<sub>FP</sub> Conditions: Pulse Width ≤ 10msec

\*T<sub>sol</sub> Conditions: 3mm from the base of the epoxy bulb

■ Typical Optical/ Electrical Characteristics Ta=25°C

Item	Symbol	Condition	Rank	Min.	Typ.	Max.	Unit
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> =20mA	W	2900		3770	mcd
			X	3770		4900	mcd
			Y	4900		6370	mcd
Forward Voltage	V <sub>F</sub>			2.6	3.2	3.5	V
Viewing Angle	2θ 1/2			--	60/30	--	deg
Dominant Wavelength	λ <sub>D</sub>			515	--	525	nm
Recommend Forward Current	I <sub>F(rec)</sub>	--		--	--	20	mA
Reverse Current	I <sub>R</sub>	V <sub>r</sub> =5V		--	--	10	uA

Notes:

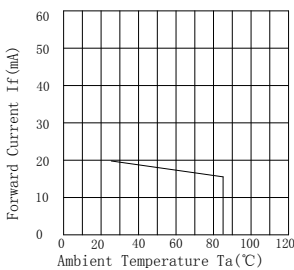
Tolerance : V<sub>F</sub> ± 0.1V, λ<sub>d</sub> ± 2 nm, I<sub>v</sub>(φ V) ± 15%, 2θ 1/2 ± 15%



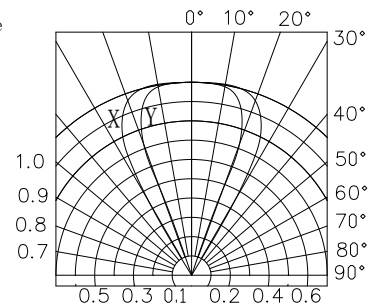
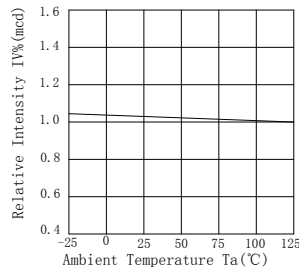
■ Reliability Performance  
Test Items And Result

Test Classification	Test Item	Test Conditions	Test Duration	Sample Size	AC/RE
Life Test	Room Temperature DC Operating Life Test	Ta=25°C±5°C, IF=20mA	1000 hrs	22 pcs	0/1
Environment Test	Thermal Shock Test	100°C±5°C 5min ↑ ↓ -40°C±5°C 5min.	100 cycles	22 pcs	0/1
	Temperature Cycle Test	100°C±5°C 30min ↑ ↓ 5min -40°C±5°C 30min.	100 cycles	22 pcs	0/1
	High Temperature & High Humidity Test	85°C ± 5°C / 85% RH IF=5mA	1000 hrs	22 pcs	0/1
	High Temperature Storage	Ta=100°C ± 5°C	1000 hrs	22 pcs	0/1
	Low Temperature Storage	Ta=-40°C ± 5°C	1000 hrs	22 pcs	0/1
Mechanical Test	Resistance to Soldering Heat	Temp=260°C max T=5sec max	1times	22 pcs	0/1
	Lead Integrity	Load 2.5N(0.25kgf) 0° ~ 90° ~ 0°	3times	22 pcs	0/1

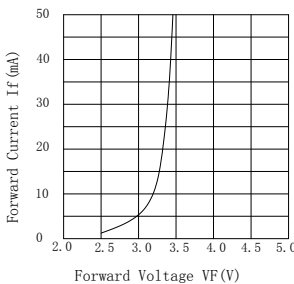
Forward Current vs. Ambient Temperature



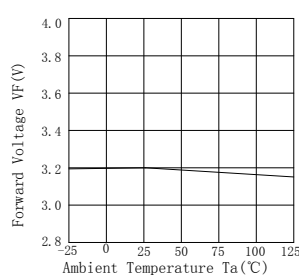
Relative Intensity IV% (mod) vs. Ambient Temperature



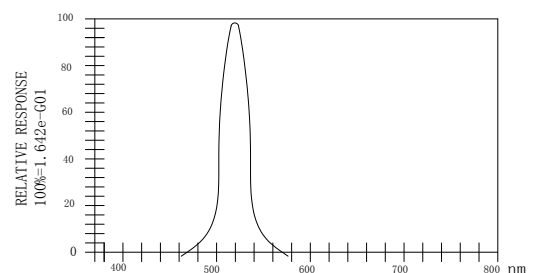
Forward Current vs. Forward Voltage



Forward Voltage VF (V) vs. Ambient Temperature



Luminous Spectrum (Ta=25°C) SPECTRAL RADIANCE





## Soldering:

### 1. Manual Of Soldering

The temperature of the iron tip should not be higher than 300°C and Soldering within 3 seconds per solder-land is to be observed.

### 2. DIP soldering (Wave Soldering):

Preheating: 120°C~150°C, within 120~180 sec.

Operation heating: 245°C ± 5°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching).

