

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-508U30GD

Sending Date:

送样日期: \_\_\_\_\_

Client approval 客户审核			Goozo approval 鸿利国泽审核		
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:			



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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



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



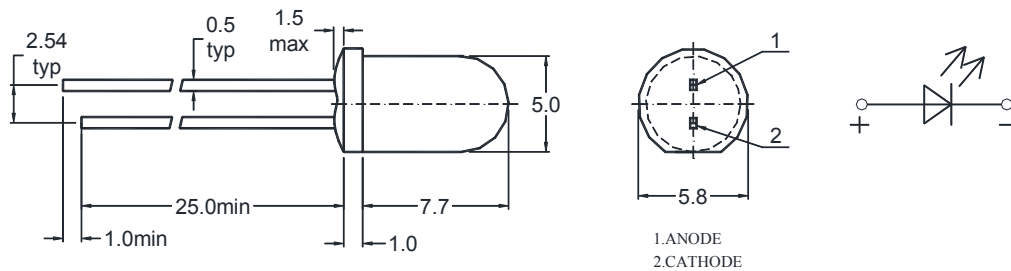
**Features**

$\phi$  5LAMP LED 直插  $\phi$ 5LED 灯  
 Low Power Consumption/低功耗  
 IDEAL FOR BACKLIGHT AND INDICATOR.  
 用于背光和指示

**Description/描述**

This devices are made with InGaN /LED  
 芯片组成元素 InGaN.

**Package Dimensions**



Tolerance Grade/公差等级	Dimension Tolerance/尺寸 (Unit:mm)			
	0.5~3	3~6	6~30	30~120
	±0.1	±0.2	±0.3	±0.5
Chip/晶片		Lens Color/胶体颜色		
Material/材质	Emitting Color/ 发光颜色	Water Clear /无色透明		
InGaN	Green/绿色			

**■ Absolute Maximum Rating Ta=25°C**

Item 项目	Symbol 符号	Value 数值	Unit 单位
Forward Current 正向电流	IF	30	mA
Peak Forward Current* 峰值正向电流	IFP	100	mA
Reverse Voltage 反向电压	VR	5	V
Power Dissipation 功耗	PD	110	mW
Electrostatic discharge 抗静电能力	ESD	2000	V
Operation Temperature 操作温度	Topr	-30~+85	°C
Storage Temperature 储存温度	Tstg	-40~+100	°C
Lead Soldering Temperature* 引脚焊接温度	Tsol	Max. 260°C for 5sec Max.	

\*IFP Conditions: Pulse Width≤10msec /IFP 正向峰值电流使用条件: 脉冲宽度≤10 毫秒

\*Tsol Conditions: 1.6mm from the base of the epoxy bulb/Tsol 焊接条件: 焊接位置离胶体底部 1.6 毫米

**■ Typical Optical/ Electrical Characteristics Ta=25°C**

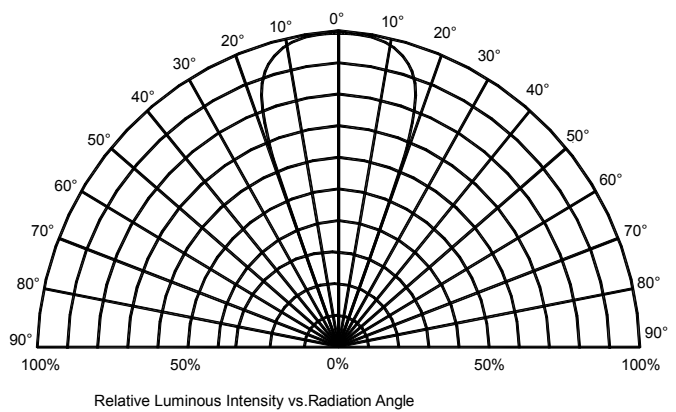
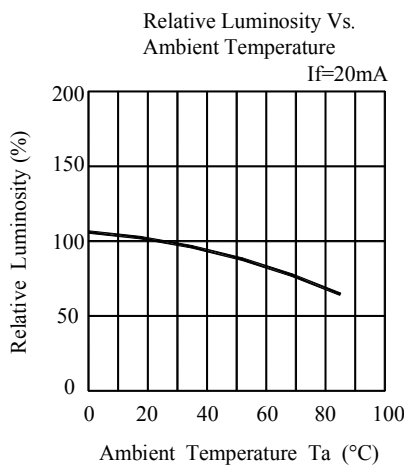
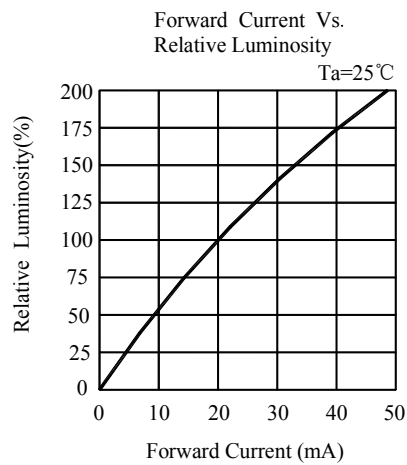
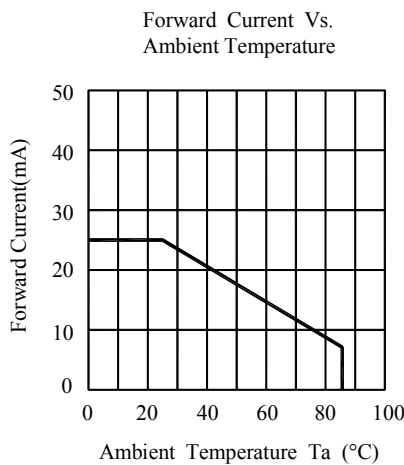
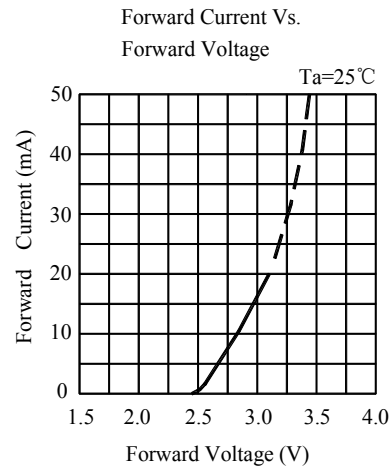
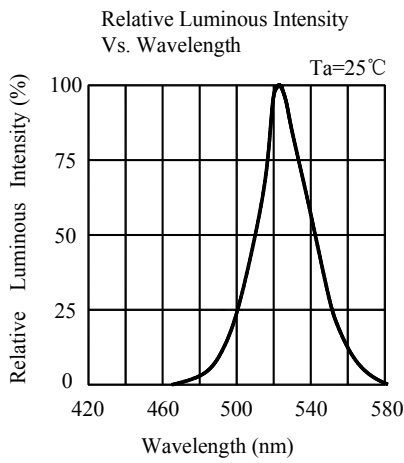
Item (项目)	Symbol 符号	Condition 条件	Rank 档次	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位
Luminous Intensity (光强)	Iv	IF=20mA	U	1715	--	2230	mcd
			V	2230	--	2900	mcd
			W	2900	--	3770	mcd
Forward Voltage 正向电压	VF			2.6	3.0	3.4	V
Viewing Angle 角度	2θ 1/2			--	40	--	deg
Dominant Wavelength 主波长	λD				515	--	524
Recommend Forward Current 推荐使用正向电流	IF(rec)	--		--	--	20	mA
Reverse Current 反向电流	IR	VR=5V		--	--	10	uA

Notes/注释:

Tolerance : VF±0.1V, λD±2 nm, IV(φV) ±15%, 2θ 1/2±15%, X/Y±0.005.

公差: 正向电压±0.1V, 主波长±2 nm, 光强 (光通量) ±15%, 角度±15%, X/Y±0.005.

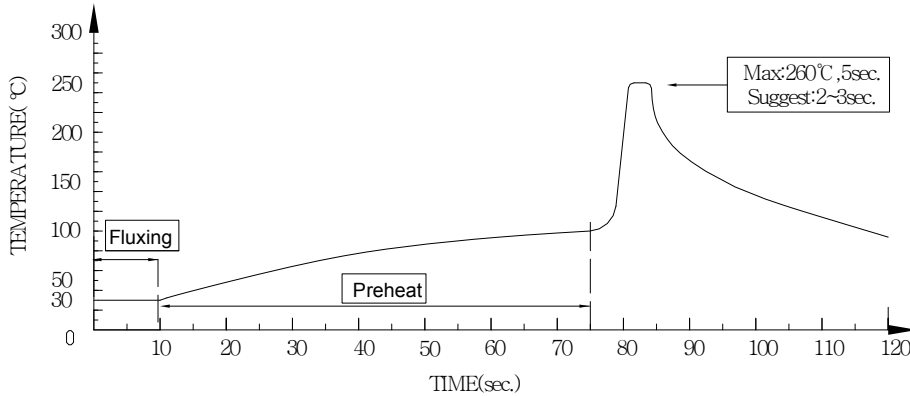
### ● Typical Electro-Optical Characteristics Curves:



**■ Reliability Performance 可靠性**
**Test Items And Result 测试项目和判定**

Test Classification 测试类别	Test Item 测试项目	Test Conditions 测试条件	Test Duration 测试持续时间	Sample Size 样品数量	AC/RE 接受/拒收
Life Test 寿命测试	Room Temperature DC Operating Life Test 室温直流寿命测试	Ta=25°C±5°C, If=20mA	1000 hrs	22 pcs	0/1
Environment Test 环境模拟 实验	Thermal Shock Test 冷热冲击	100°C±5°C 5min ↑↓ -40°C±5°C 5min.	100 cycles	22 pcs	0/1
	Temperature Cycle Test 高低温循环实验	100°C±5°C 30min ↑↓5min -40°C±5°C 30min.	100 cycles	22 pcs	0/1
	High Temperature & High Humidity Test 高温高湿实验	85°C±5°C/85% RH IF=5mA	1000 hrs	22 pcs	0/1
	High Temperature Storage 高温储存	Ta=100°C±5°C	1000 hrs	22 pcs	0/1
	Low Temperature Storage 低温储存	Ta=-40°C±5°C	1000 hrs	22 pcs	0/1
Mechanica Test 机械测试	Resistance to Soldering Heat 耐焊接实验	Temp=260°Cmax T=5sec max	1times	22 pcs	0/1
	Lead Integrity 引脚折弯实验	Load 2.5N(0.25kgf) 0° ~ 90° ~0°	3times	22 pcs	0/1

## ■ Dip Soldering/焊接



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering/在高温焊接过程中，不可有任何外力施加在 LED 的引脚、环氧上；
2. DIP soldering and hand soldering should not be done more than one time/浸焊、手工焊接次数不可超过 1 次；
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature/焊接后，在 LED 温度恢复到室温的过程中，不可受到震动或其它外力的冲击；
4. Avoid rapid cooling during temperature ramp-down process/在 LED 降温过程中，避免急剧的冷却；
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs/LED 在焊接过程中，应尽可能的降低焊接温度，以减少高温对 LED 的损伤；

## ■ IRON Soldering/手动焊接

300°C Within 3 sec., One time only/300°C, 3 秒, 1 次；