

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-508U70GC

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: | |

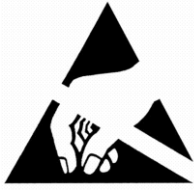


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地址 : 江苏省镇江市丹徒区丹桂路 1 号

Tel/电话 : 0511-88786599 Fax/传真 : 0511-88786599 Web/网址 : www.goozo.com.cn

- 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

φ 5LAMP LED 直插 φ5LED 灯

Low Power Consumption/低功耗

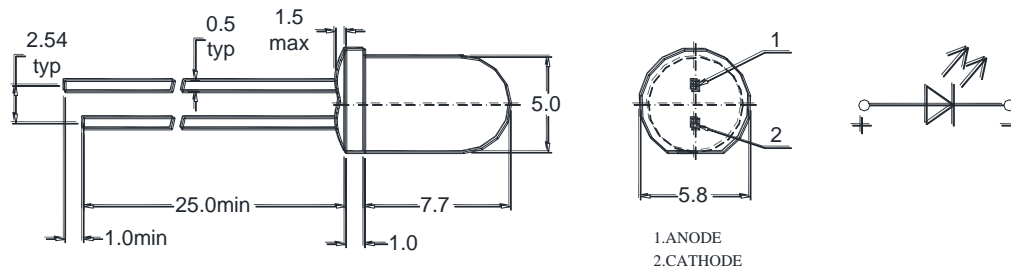
IDEAL FOR BACKLIGHT AND INDICATOR.

用于背光和指示

Description/描述

This devices are made with InGaN /LED

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 | -40~+80 | °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

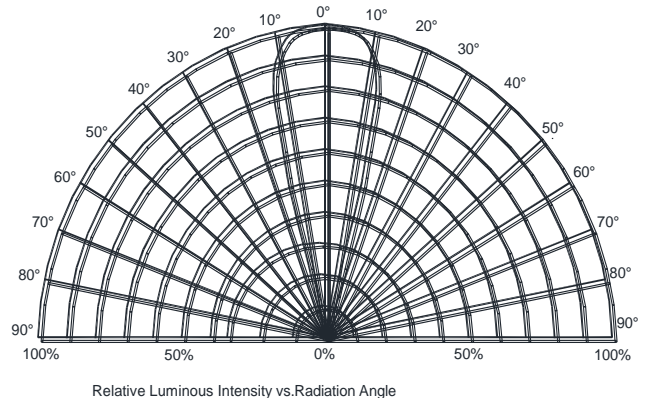
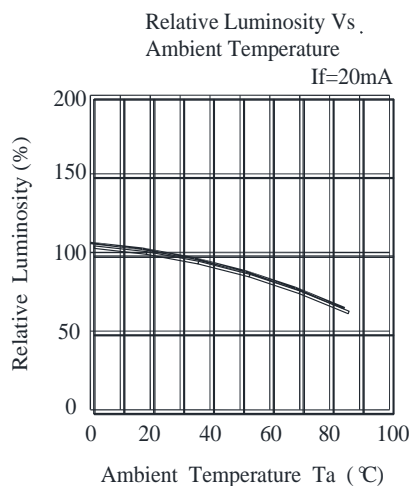
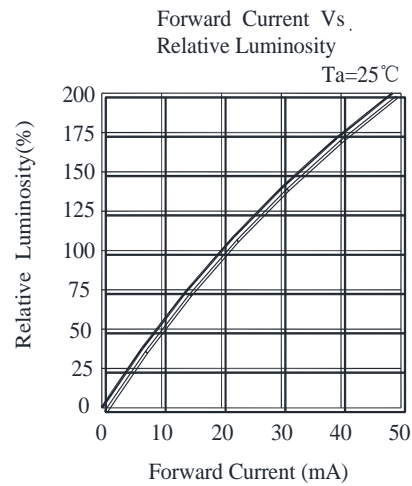
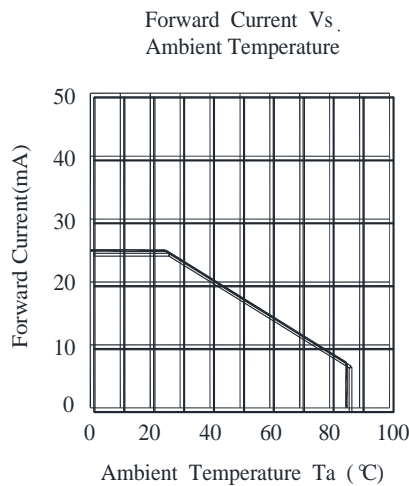
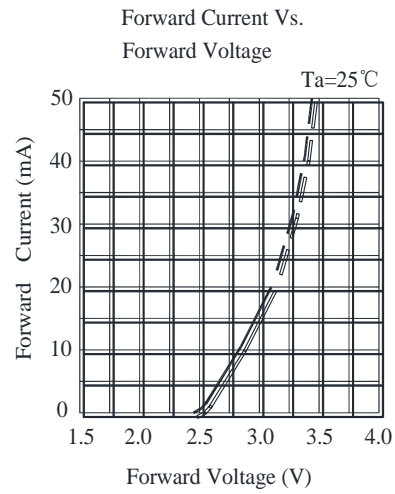
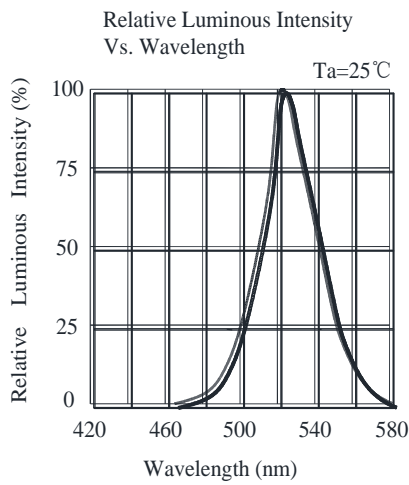
| Item (项目) | Symbol 符号 | Condition 条件 | Rank 档次 | Min. 最小值 | Typ. 典型值 | Max. 最大值 | Unit 单位 |
|------------------------------------|----------------|--------------------|---------|----------|----------|----------|---------|
| Luminous Intensity (光强) | Iv | IF=20mA | Z6 | 30758 | -- | 39985 | mcd |
| | | | Z7 | 39985 | -- | 51981 | mcd |
| | | | Z8 | 51981 | -- | 67575 | mcd |
| Forward Voltage 正向电压 | VF | | | 2.6 | 3.0 | 3.4 | V |
| Viewing Angle 角度 | 2θ 1/2 | | | -- | 15 | -- | deg |
| Dominant Wavelength 主波长 | λ _D | | | 516 | -- | 524 | nm |
| Recommend Forward Current 推荐使用正向电流 | IF(rec) | -- | | -- | -- | 20 | mA |
| Reverse Current 反向电流 | IR | V _R =5V | | -- | -- | 10 | uA |

Notes/注释:

Tolerance : VF±0.1V , λ_D±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.

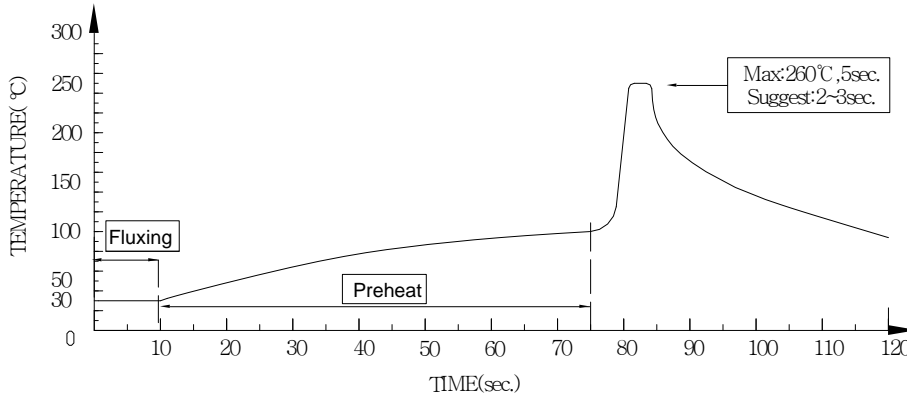
● Typical Electro-Optical Characteristics Curves:



■ 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 | $T_a=25^{\circ}\text{C}\pm 5^{\circ}\text{C}$, $I_f=20\text{mA}$ | 1000 hrs | 22 pcs | 0/1 |
| Environment Test 环境模拟 实验 | Thermal Shock Test 冷热冲击 | $100^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 5min ↑↓ $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 5min. | 100 cycles | 22 pcs | 0/1 |
| | Temperature Cycle Test 高低温循环实验 | $100^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 30min ↑↓5min $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 30min. | 100 cycles | 22 pcs | 0/1 |
| | High Temperature & High Humidity Test 高温高湿实验 | $85^{\circ}\text{C}\pm 5^{\circ}\text{C}/85\% \text{RH}$ $I_F=5\text{mA}$ | 1000 hrs | 22 pcs | 0/1 |
| | High Temperature Storage 高温储存 | $T_a=100^{\circ}\text{C}\pm 5^{\circ}\text{C}$ | 1000 hrs | 22 pcs | 0/1 |
| | Low Temperature Storage 低温储存 | $T_a=-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ | 1000 hrs | 22 pcs | 0/1 |
| Mechanica Test 机械测试 | Resistance to Soldering Heat 耐焊接实验 | Temp= 260°C max T=5sec max | 1times | 22 pcs | 0/1 |
| | Lead Integrity 引脚折弯实验 | Load 2.5N(0.25kgf) $0^{\circ} \sim 90^{\circ} \sim 0^{\circ}$ | 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；