

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-304S33YD

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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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



ATTENTION 注意
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

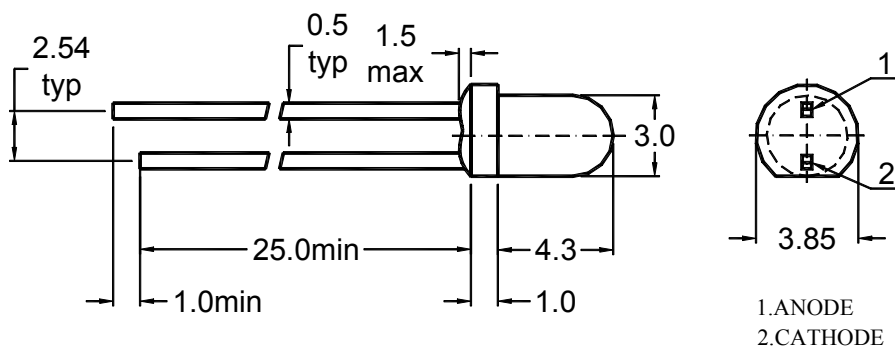
Features 特征

- $\phi 3$ LAMP LED 直插 $\phi 3$ LED 灯
- LOW POWER CONSUMPTION.低功耗
- WIDE VIEWING ANGLE.小角度
- IDEAL FOR BACKLIGHT AND INDICATOR.
用于背光和指示

Description/描述

This devices are made with AlGaInP

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 | Yellow Diffused/黄色散射 | | |
| AlGaInP | Yellow /黄色 | | | |

■ Absolute Maximum Rating

| 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

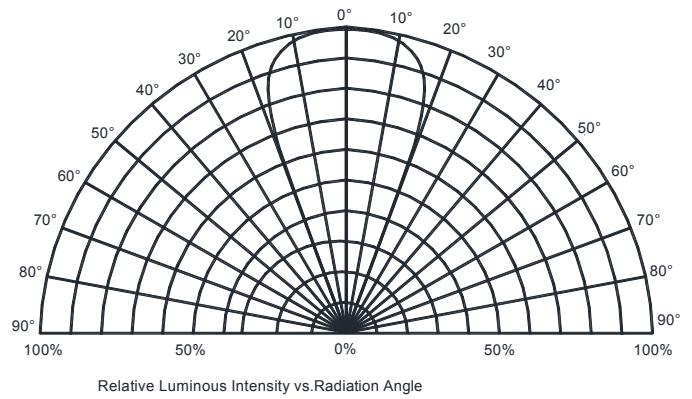
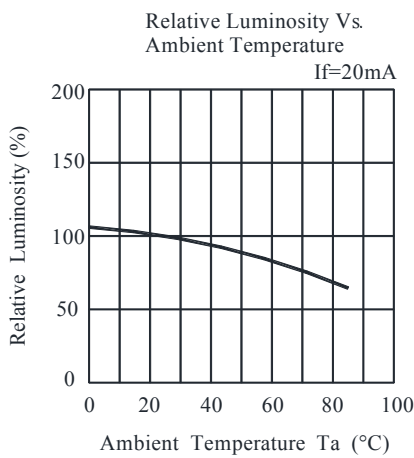
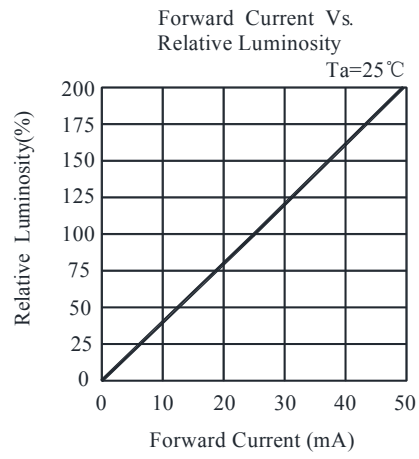
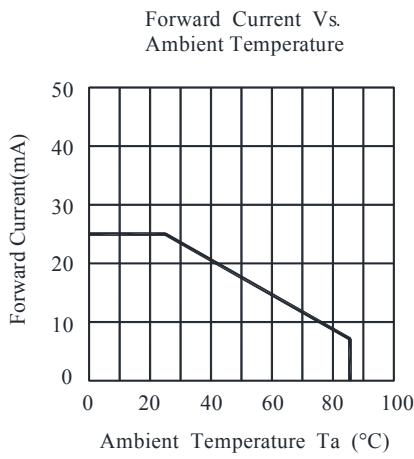
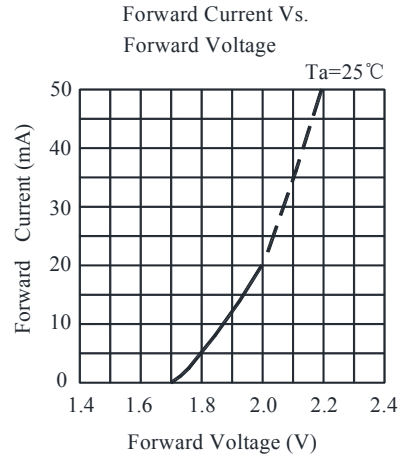
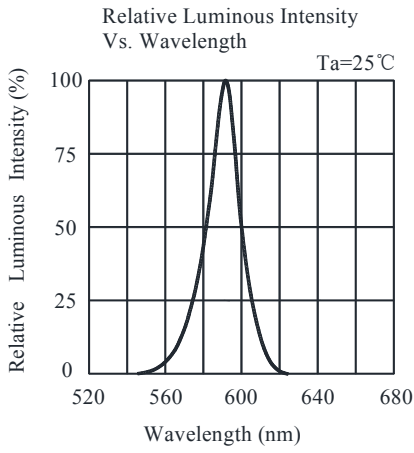
■ Typical Optical/ Electrical Characteristics Ta=25°C

| 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 | | -- | 250 | -- | mcd |
| Forward Voltage/正向电压 | VF | | | 1.8 | -- | 2.4 | V |
| Viewing Angle/角度 | 2θ 1/2 | | | -- | 40 | -- | deg |
| Dominant Wavelength/主波长 | λ _D | | | 586 | -- | 592 | nm |
| 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 , 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.

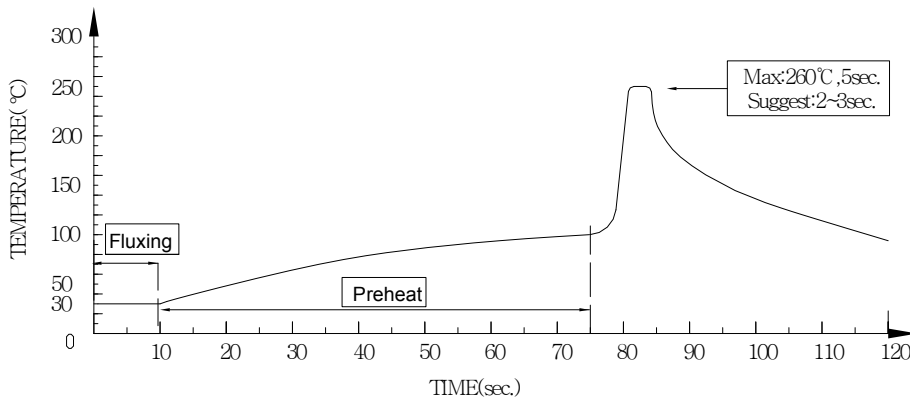


■ Reliability Performance 可靠性

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;