



LEDTECH ELECTRONICS CORP.

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Http://www.ledtech.com.tw

SPECIFICATION

PART NO. : LT1831-81-UB91-P27

5.0MM ROUND LED LAMP

| Approved by | Checked by | Prepared by |
|-------------|-------------|-------------|
| <i>San</i> | <i>Jang</i> | <i>Duan</i> |



5.0MM ROUND LED LAMP
PART NO. :LT1831-81-UB91-P27

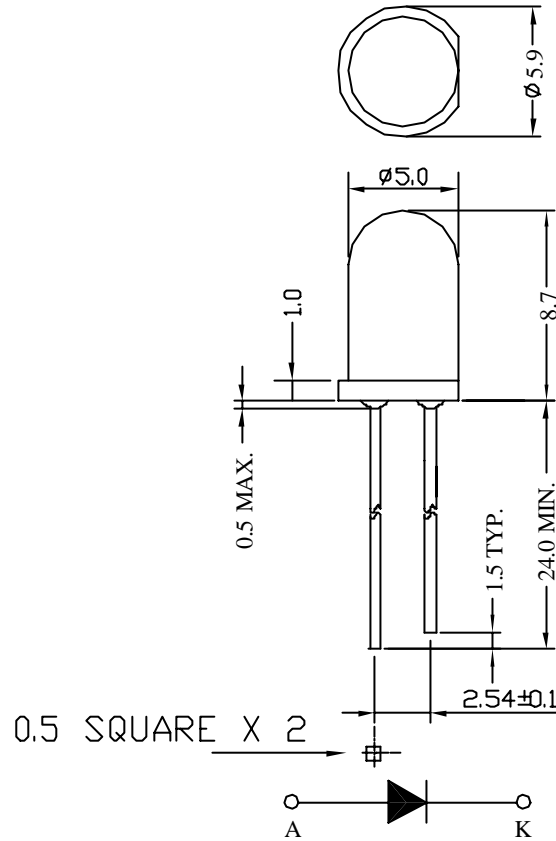
Features

- * High intensity
- * Reliable and rugged
- * Low current requirement
- * IC compatible

Description

The Yellow lamp are made with AlGaInP/GaAs chip and yellow diffused epoxy resin.

Package Dimensions



Notes:

- 1.All dimensions are in millimeters.
- 2.Tolerance is ± 0.25 mm unless otherwise noted.

| Part No. | Led Chip | | Lens Color |
|--------------------|--------------|----------------|-----------------|
| | Material | Emitting Color | |
| LT1831-81-UB91-P27 | AlGaInP/GaAs | Yellow | Yellow diffused |



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Absolute Maximum Ratings at Ta=25 :

| Parameter | Symbol | Rating | Unit |
|---|----------|-------------|------|
| Power Dissipation | Pd | 72 | mW |
| Reverse Voltage | Vr | 4 | V |
| D.C. Forward Current | If | 30 | mA |
| Peak Current (1/10 Duty Cycle , 0.1 ms Pulse Width) | If(Peak) | 100 | mA |
| Operating Temperature Range | Topr | -25 to +85 | |
| Storage Temperature Range | Tstg | -40 to +100 | |
| Lead Soldering Temp.(1.6mm from body) for 5 seconds | | 260 | |

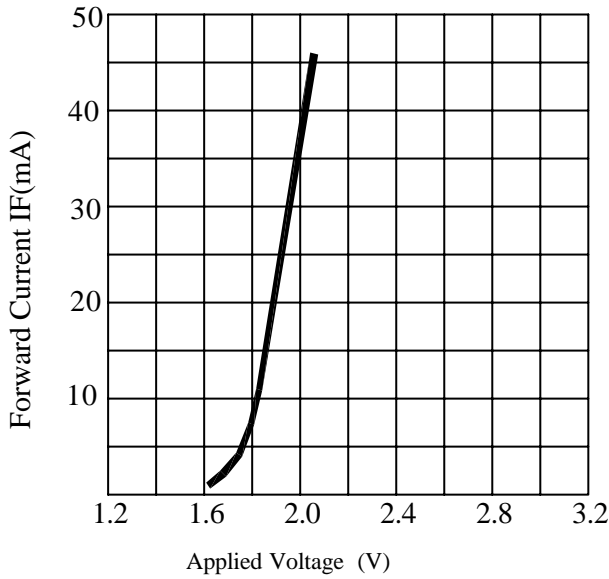
Electrical and Optical Characteristics :

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|--------|-----------|------|------|------|------|
| Luminous Intensity | Iv | If=20mA | 550 | 900 | | mcd |
| Forward Voltage | Vf | If=20mA | | 1.9 | 2.4 | V |
| Peak Wavelength | P | If=20mA | | 589 | | nm |
| Dominant Wavelength | D | If=20mA | | 591 | | nm |
| Reverse Current | Ir | Vr=4V | | | 100 | μ A |
| Viewing Angle | 2 1/2 | If=20mA | | 40 | | deg |
| Spectrum Line Halfwidth | | If=20mA | | 15 | | nm |

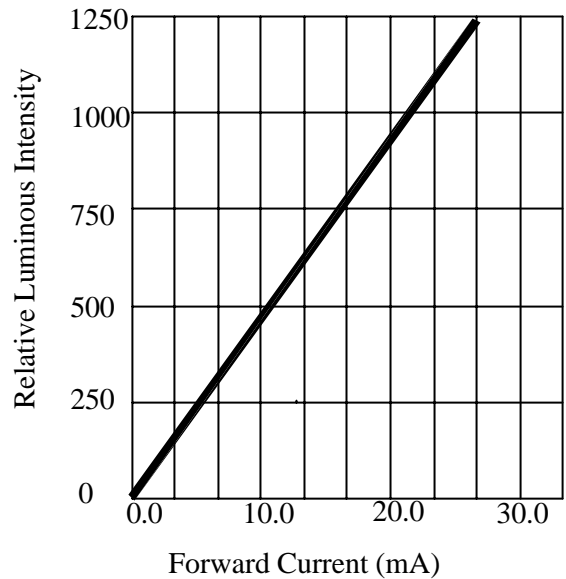


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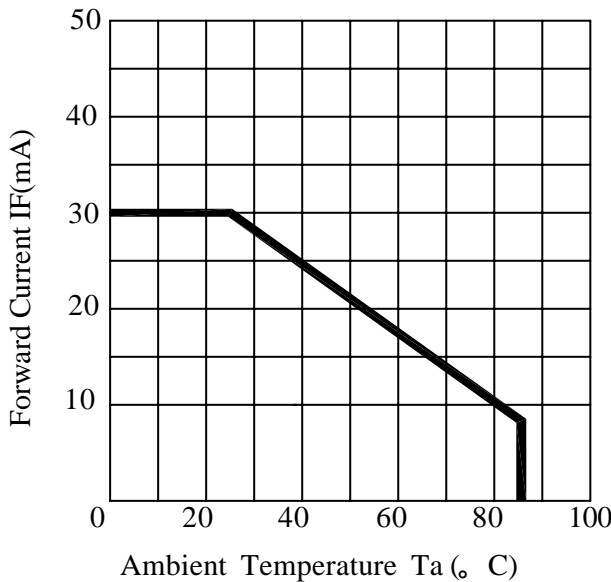
Typical Electrical / Optical Characteristics Curves :



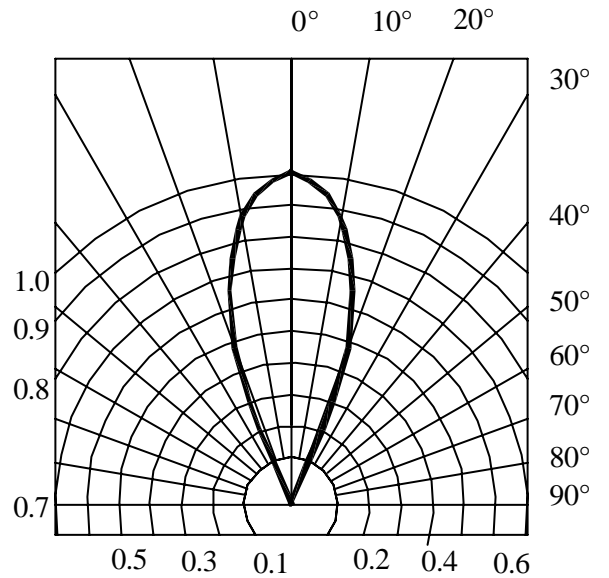
FORWARD CURRENT VS. APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY



AMBIENT TEMPERATURE VS. FORWARD CURRENT



RADIATION DIAGRAM



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Reliability Test Method :

| Test Item | Test Condition | Duration Time |
|---|--------------------------------|---------------|
| Operation Life | If=20mA / Ta=25 | 168hrs |
| Storage at High Temperature | Ta=100 | 168hrs |
| Storage at Low Temperature | Ta=-40 | 168hrs |
| Storage at High Temperature/High Humidity | Ta=85 /RH=85 % | 168hrs |
| Operating at High Temperature | Ta=85 / If=20mA | 168hrs |
| Operating at Low Temperature | Ta=-25 / If=20mA | 168hrs |
| Thermal Shock | Ta/T=100 /30min~ -40 /30min | 10 cycles |
| Solderability | Tsol=230 | 5 sec |

Criteria for Judging The Damage:

| Item | Symbol | Test Condition | Criteria for Judgment | |
|--------------------|--------|----------------|-----------------------|-------------------|
| | | | Min. | Max. |
| Forward Voltage | Vf | If=20mA | ----- | Initial Data x1.1 |
| Reverse Current | Ir | Vr=4V | ----- | 100 μ A |
| Luminous Intensity | Iv | If=20mA | Initial Data x0.8 | ----- |

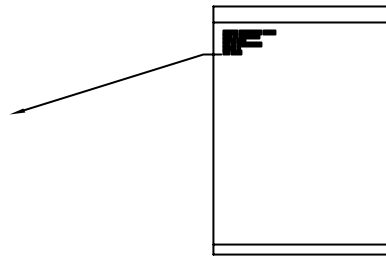


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ENCASED TYPE

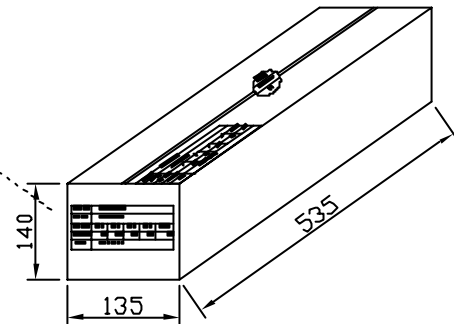
PLASTIC PACKAGE
 QUANTITY: 1,000 PCS

| | |
|---------------------------|-------------|
| LEDTECH ELECTRONICS CORP. | |
| PART NO :LTXXXX-XX | |
| QTY | : PCS |
| LOT NO | :XXXXXXXXXX |
| DATE | : |
| BIN CODE: | |



INNER BOX
 QUANTITY: 10 PACKETS
 TOTAL: 10,000 PCS

| | | | | | |
|----------|--------------|------|------|------|-------|
| PART NO. | LXXXXX-XX-XX | | | | |
| LOT NO. | XXXXXXXXXX | | | | |
| BIN CODE | Xx X | Xx X | Xx X | Xx X | TOTAL |
| QUANTITY | PCS | PCS | PCS | PCS | PCS |
| DATE | XXXX, XX, XX | | | | |



OUTER CARTON
 QUANTITY: 4 BOX
 TOTAL: 40,000 PCS

| | |
|-----------------|--------------|
| C/T NO. 箱 號 | XX |
| PART NO. 料 號 | LXXXXX-XX-XX |
| QUANTITY 數 量 | PCS |
| N.W. 淨 重 | KGS |
| G.W. 毛 重 | KGS |
| REMARK 備 註 | |

