BIPOLAR TYPE LED LAMPS

# LEG15262

# DATA SHEET

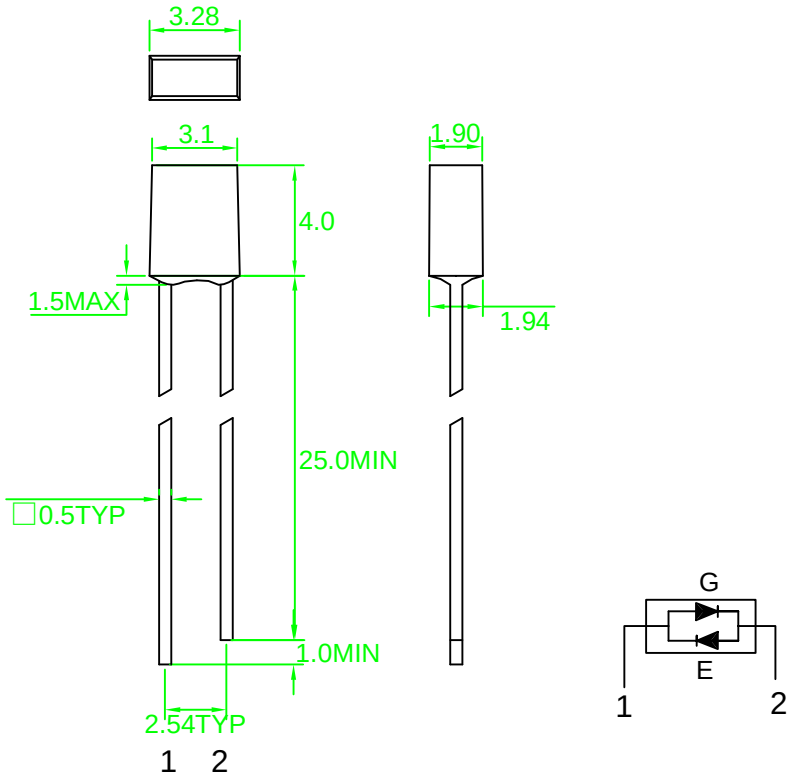
DOC. NO : QW0905-LEG15262

REV. : A

DATE : 07 - Dec.- 2005

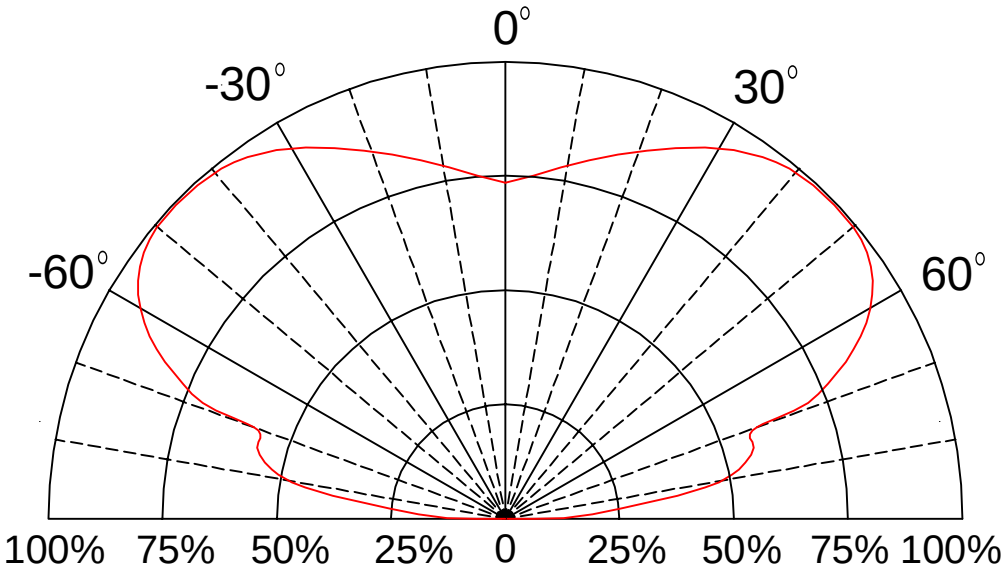
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## Package Dimensions




Note : 1.All dimension are in millimeter tolerance is ±0.25mm unless otherwise noted.
2.Specifications are subject to change without notice.

## Directivity Radiation



## Absolute Maximum Ratings at Ta=25 ℃

| Parameter | Symbol | Absolute Maximum Ratings | | UNIT |
|---|---|---|---|---|
| | | E | G | |
| Forward Current | $I_F$ | 30 | 30 | mA |
| Peak Forward Current Duty 1/10@10KHz | $I_{FP}$ | 120 | 120 | mA |
| Power Dissipation | PD | 100 | 100 | mW |
| Reverse Current @5V | Ir | 10 | 10 | μA |
| Operating Temperature | $T_{opr}$ | -40 ~ +85 | | ℃ |
| Storage Temperature | Tstg | -40 ~ +100 | | ℃ |
| Soldering Temperature | Tsol | Max 260℃ for 5 sec Max (2mm from body) | | |

## Typical Electrical & Optical Characteristics (Ta=25 ℃)

| PART NO | MATERIAL | COLOR | | Peak wave length λ Pnm | Spectral halfwidth △λ nm | Forward voltage @20mA(V) | | Luminous intensity @10mA(mcd) | | Viewing angle 2θ 1/2 (deg) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Emitted | Lens | | | Min. | Max. | Min. | Typ. | |
| LEG15262 | GaAsP/GaP | Orange | White Diffused | 635 | 45 | 1.7 | 2.6 | 3.0 | 5.0 | 160 |
| | GaP | Green | | 565 | 30 | 1.7 | 2.6 | 4.5 | 9.0 | 160 |

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2. The luminous intensity data did not including ±15% testing tolerance.

# Typical Electro-Optical Characteristics Curve

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Fig.1 Forward current vs. Forward Voltage

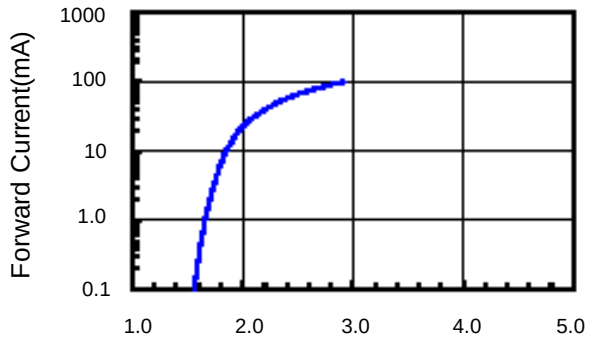



Fig.2 Relative Intensity vs. Forward Current

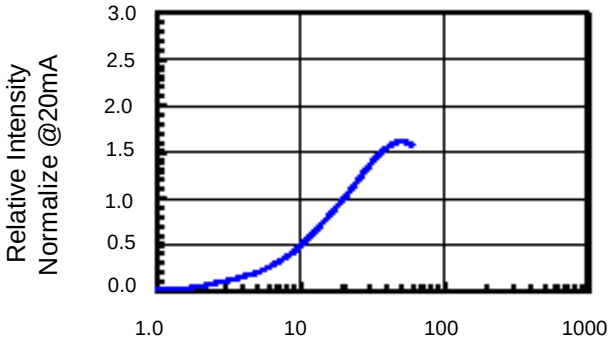



Fig.3 Forward Voltage vs. Temperature

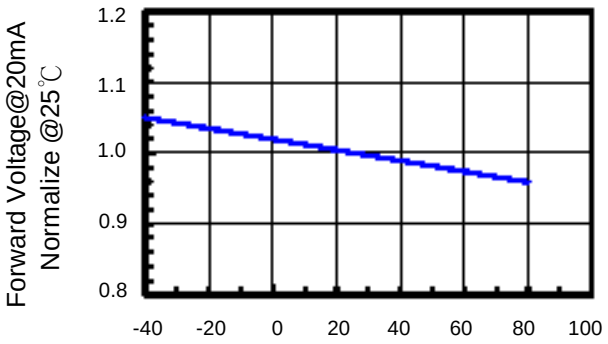



Fig.4 Relative Intensity vs. Temperature

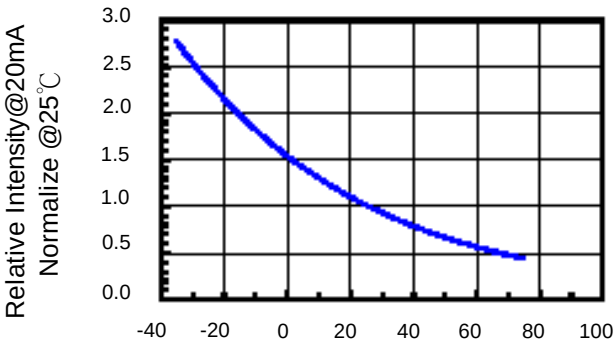
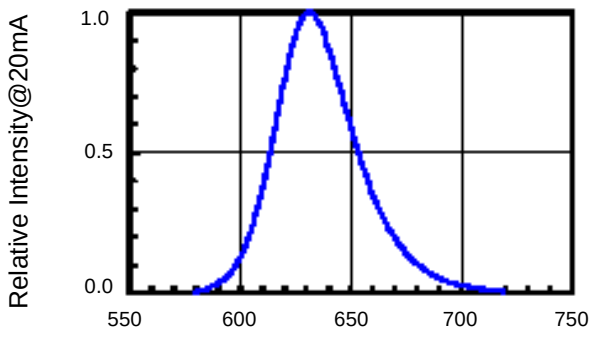



Fig.5 Relative Intensity vs. Wavelength



# Typical Electro-Optical Characteristics Curve

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Fig.1 Forward current vs. Forward Voltage

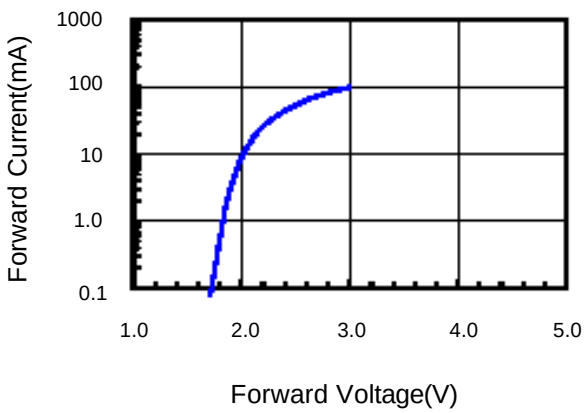



Fig.2 Relative Intensity vs. Forward Current

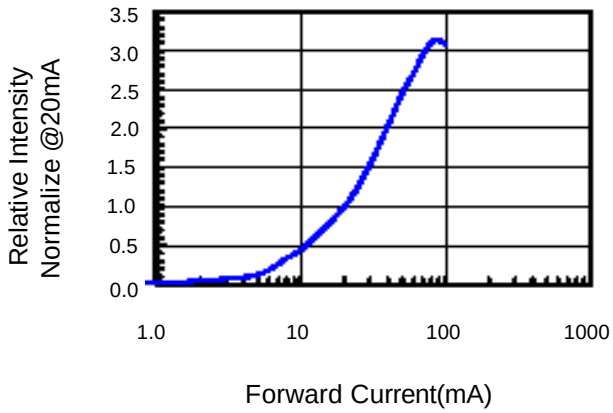



Fig.3 Forward Voltage vs. Temperature

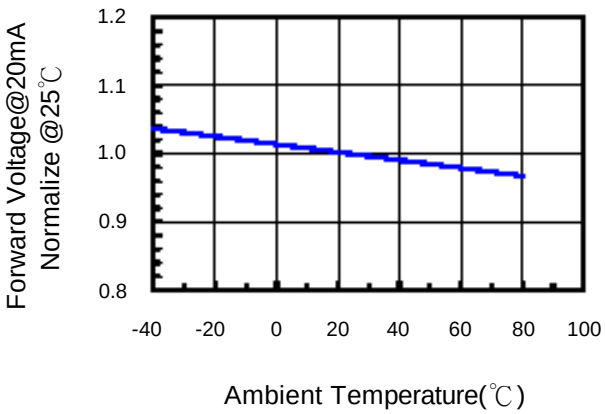



Fig.4 Relative Intensity vs. Temperature

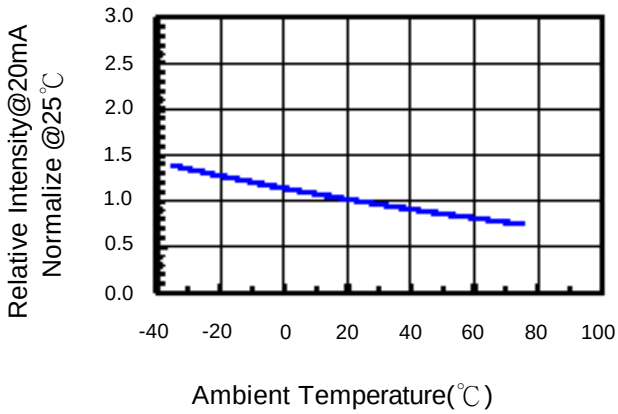
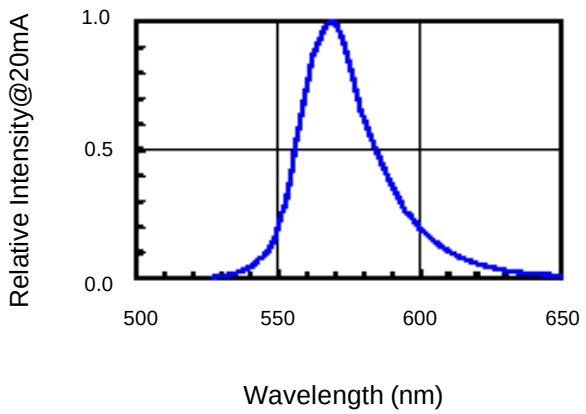



Fig.5 Relative Intensity vs. Wavelength



# Reliability Test:

| Test Item | Test Condition | Description | Reference Standard |
|---|---|---|---|
| Operating Life Test | 1.Under Room Temperature<br>2.If=20mA<br>3.t=1000 hrs (-24hrs, +72hrs) | This test is conducted for the purpose of detemining the resisance of a part in electrical and themal stressed. | MIL-STD-750: 1026<br>MIL-STD-883: 1005<br>JIS C 7021: B-1 |
| High Temperature Storage Test | 1.Ta=105℃±5℃<br>2.t=1000 hrs (-24hrs, +72hrs) | The purpose of this is the resistance of the device which is laid under ondition of high temperature for hours. | MIL-STD-883:1008<br>JIS C 7021: B-10 |
| Low Temperature Storage Test | 1.Ta=-40℃±5℃<br>2.t=1000 hrs (-24hrs, +72hrs) | The purpose of this is the resistance of the device which is laid under condition of low temperature for hours. | JIS C 7021: B-12 |
| High Temperature High Humidity Test | 1.Ta=65℃±5℃<br>2.RH=90%~95%<br>3.t=240hrs±2hrs | The purpose of this test is the resistance of the device under tropical for hous. | MIL-STD-202:103B<br>JIS C 7021: B-11 |
| Thermal Shock Test | 1.Ta=105℃±5℃&-40℃±5℃<br>(10min) (10min)<br>2.total 10 cycles | The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature. | MIL-STD-202: 107D<br>MIL-STD-750: 1051<br>MIL-STD-883: 1011 |
| Solder Resistance Test | 1.T.Sol=260℃±5℃<br>2.Dwell time= 10±1sec. | This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire. | MIL-STD-202: 210A<br>MIL-STD-750: 2031<br>JIS C 7021: A-1 |
| Solderability Test | 1.T.Sol=230℃±5℃<br>2.Dwell time=5±1sec | This test intended to see soldering well performed or not. | MIL-STD-202: 208D<br>MIL-STD-750: 2026<br>MIL-STD-883: 2003<br>JIS C 7021: A-2 |