



LEDTECH ELECTRONICS CORP.

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SPECIFICATION

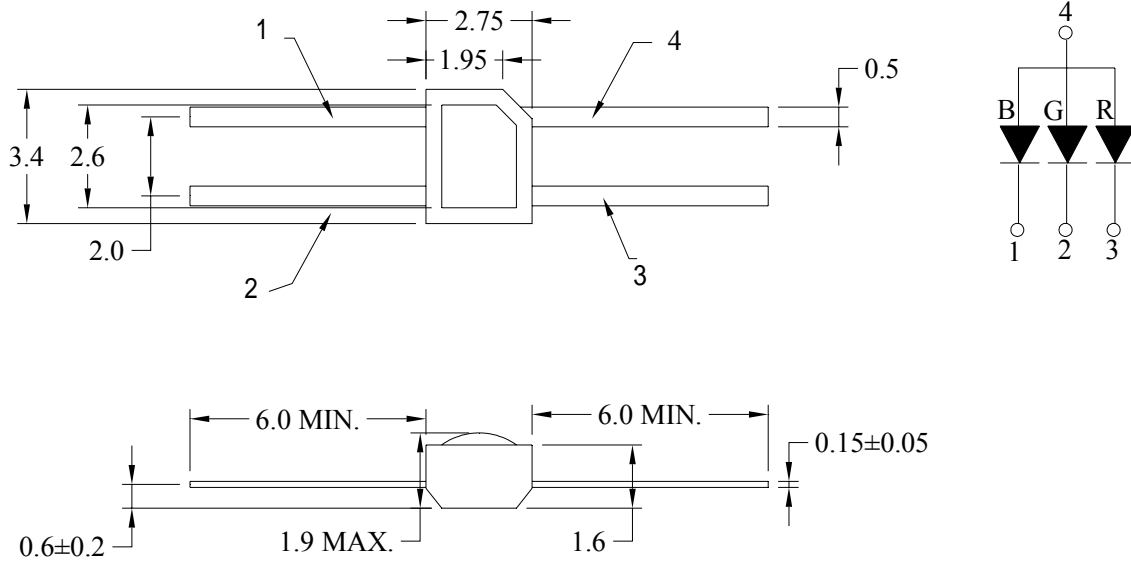
PART NO. : LT4R63-RGB-D91

2.75 x 3.4mm SMT LED LAMP



| Approved by | Checked by | Prepared by |
|-------------|-------------|-------------|
| <i>Tung</i> | <i>Lian</i> | <i>Show</i> |

Package Dimensions



Notes:

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

Description

| Part No. | LED Chip | | Lens Color |
|----------------|----------------|----------------|-------------|
| | Material | Emitting Color | |
| LT4R63-RGB-D91 | AlGaInP/GaAs | Hyper Red | Water Clear |
| | InGaN/Sapphire | True Green | |
| | InGaN/Sapphire | Blue | |

Absolute Maximum Ratings at Ta=25

| Parameter | Symbol | Rating | Unit |
|---|-----------------------|---|------|
| Power Dissipation | PD | 72 | mW |
| Reverse Voltage | V _R | 5 | V |
| D.C. Forward Current | I _f | 30 | mA |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | I _f (Peak) | 100 | mA |
| Operating Temperature Range | Topr. | -25 to +85 | |
| Storage Temperature Range | Tstg. | -40 to +100 | |
| Soldering Temperature | Tsld. | Reflow Soldering: 260 for 10 sec. Hand Soldering: 350 for 3 sec. | |

Electrical and Optical Characteristics:

Hyper Red

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|----------------|----------------------|------|------|------|------|
| Luminous Intensity | I _v | I _f =20mA | 62.2 | 130 | | mcd |
| Forward Voltage | V _f | I _f =20mA | | 1.9 | 2.4 | V |
| Peak Wavelength | λ _p | I _f =20mA | | 632 | | nm |
| Dominant Wavelength | λ _d | I _f =20mA | | 625 | | nm |
| Reverse Current | I _r | V _r =5V | | | 100 | μA |
| Viewing Angle | 2 1/2 | I _f =20mA | | 62 | | deg |
| Spectrum Line Halfwidth | Δλ | I _f =20mA | | 20 | | nm |

Notes: 1.The datas tested by IS tester.

2. Customer's special requirements are also welcome.

Absolute Maximum Ratings at Ta=25

| Parameter | Symbol | Rating | Unit |
|---|-----------------------|---|------|
| Power Dissipation | PD | 120 | mW |
| Reverse Voltage | V _R | 5 | V |
| D.C. Forward Current | I _f | 30 | mA |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | I _f (Peak) | 100 | mA |
| Operating Temperature Range | Topr. | -25 to +85 | |
| Storage Temperature Range | Tstg. | -40 to +100 | |
| Soldering Temperature | Tsld. | Reflow Soldering: 260 for 10 sec. Hand Soldering: 350 for 3 sec. | |
| Electric Static Discharge Threshold (HBM) | ESD | 300 | V |

Electrical and Optical Characteristics:

True Green

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|----------------|----------------------|------|-------|------|------|
| Luminous Intensity | I _v | I _f =20mA | 150 | 250 | | mcd |
| Forward Voltage | V _f | I _f =20mA | | 3.2 | 4.0 | V |
| Peak Wavelength | λ _p | I _f =20mA | | ----- | | nm |
| Dominant Wavelength | λ _d | I _f =20mA | 520 | | 525 | nm |
| Reverse Current | I _r | V _r =5V | | | 50 | μA |
| Viewing Angle | 2 1/2 | I _f =20mA | | 62 | | deg |
| Spectrum Line Halfwidth | Δλ | I _f =20mA | | 35 | | nm |

Notes: 1.The datas tested by IS tester.

2. Customer's special requirements are also welcome.

Absolute Maximum Ratings at Ta=25

| Parameter | Symbol | Rating | Unit |
|---|-----------------------|---|------|
| Power Dissipation | P _D | 120 | mW |
| Reverse Voltage | V _R | 5 | V |
| D.C. Forward Current | I _f | 30 | mA |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | I _f (Peak) | 100 | mA |
| Operating Temperature Range | T _{opr.} | -25 to +85 | |
| Storage Temperature Range | T _{stg.} | -40 to +100 | |
| Soldering Temperature | T _{sl.} | Reflow Soldering: 260 for 10 sec. Hand Soldering: 350 for 3 sec. | |
| Electric Static Discharge Threshold (HBM) | ESD | 300 | V |

Electrical and Optical Characteristics:

Blue

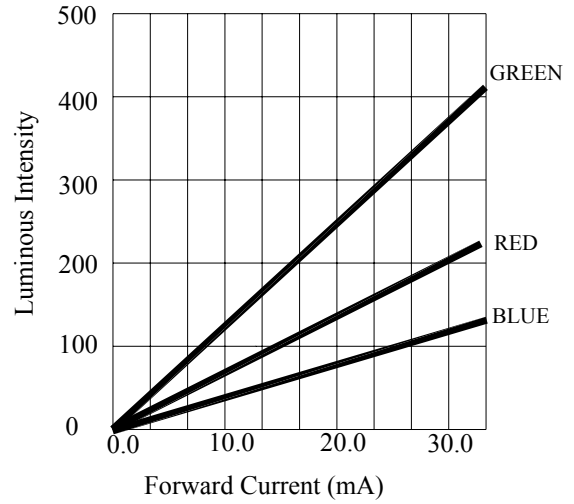
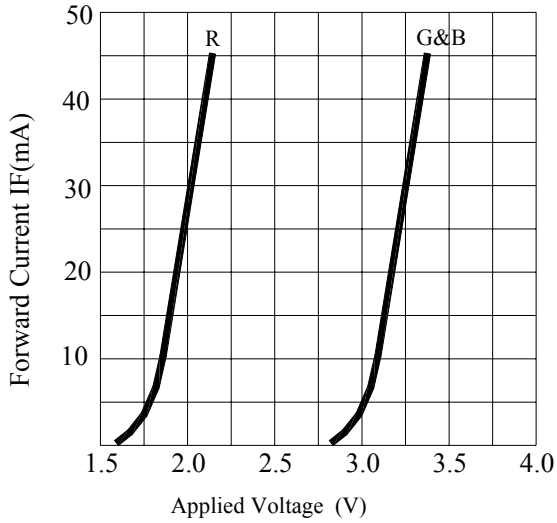
| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|----------------|----------------------|------|-------|------|------|
| Luminous Intensity | I _v | I _f =20mA | 27 | 70 | | mcd |
| Forward Voltage | V _f | I _f =20mA | | 3.2 | 4.0 | V |
| Peak Wavelength | λ _p | I _f =20mA | | ----- | | nm |
| Dominant Wavelength | λ _d | I _f =20mA | | 465 | | nm |
| Reverse Current | I _r | V _r =5V | | | 50 | μA |
| Viewing Angle | 2 1/2 | I _f =20mA | | 62 | | deg |
| Spectrum Line Halfwidth | Δλ | I _f =20mA | | 26 | | nm |

Notes: 1.The datas tested by IS tester.

2. Customer's special requirements are also welcome.

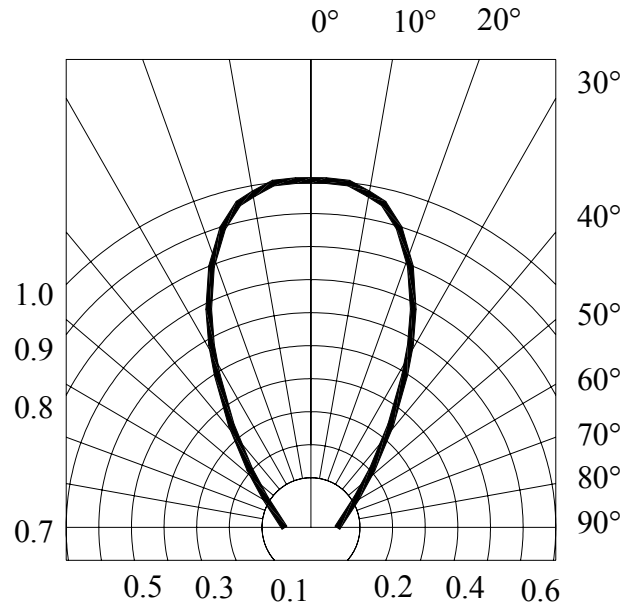
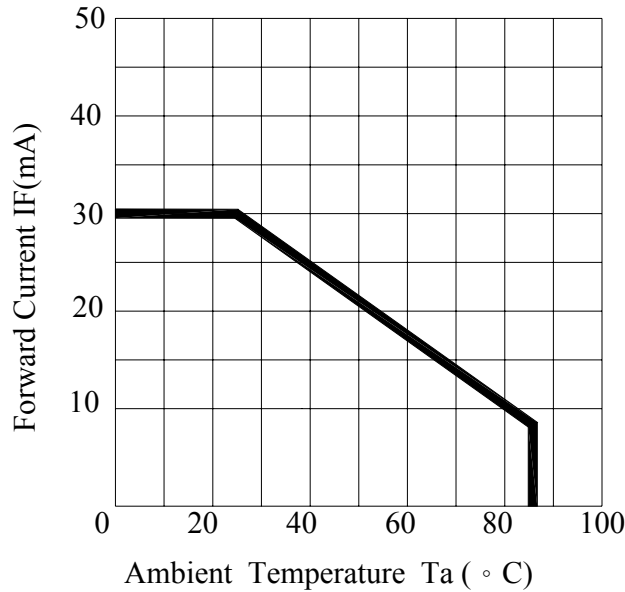
Typical Electrical/Optical Characteristic Curves

(25 Ambient Temperature Unless Otherwise Noted)



Forward Current VS. Applied Voltage

Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current

Radiation Diagram

PRECAUTION IN USE

Storage

Recommended storage environment

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Use within 7 days after opening of sealed vapor/ESD barrier bags.

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5 for 24 hours.

Fold the opened bag firmly and keep in dry environment.

Soldering

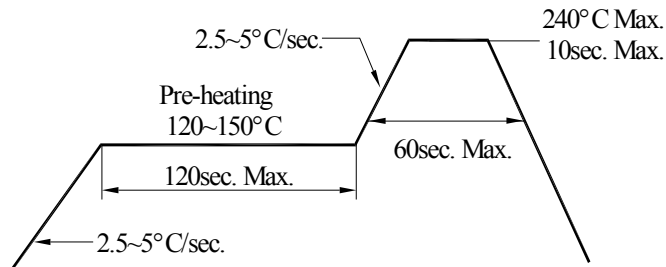
| | Reflow Soldering | | Hand Soldering | |
|------------------|---------------------------------------|---------------------------------------|----------------|-------------------------------|
| | Lead Solder | Lead – free Solder | | |
| Pre-heat | 120~150 | 180~200 | Temperature | 350 Max. |
| Pre-heat time | 120sec. Max. | 120sec. Max. | Soldering time | 3sec. Max. (one time only) |
| Peak temperature | 240 Max. | 260 Max. | | |
| Soldering time | 10sec. Max. | 10sec. Max. | | |
| Condition | refer to Temperature- profile 1 | refer to Temperature- profile 2 | | |

*After reflow soldering rapid cooling should be avoided.

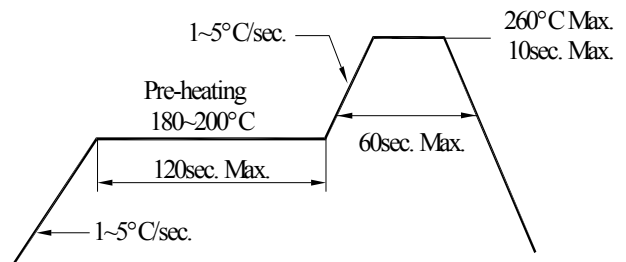
[Temperature-profile (Surface of circuit board)]

Use the conditions shown to the under figure.

< 1 : Lead Solder >



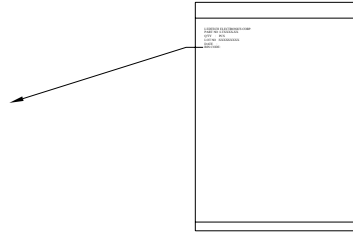
< 2 : Lead-free Solder >



ENCASED TYPE

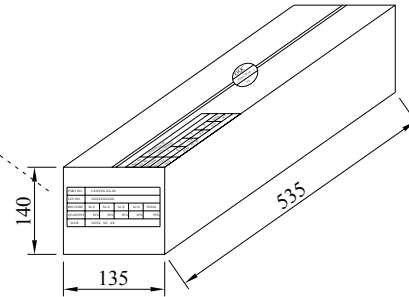
PLASTIC PACKAGE
QUANTITY: 1,000 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXX
DATE :
BIN CODE:



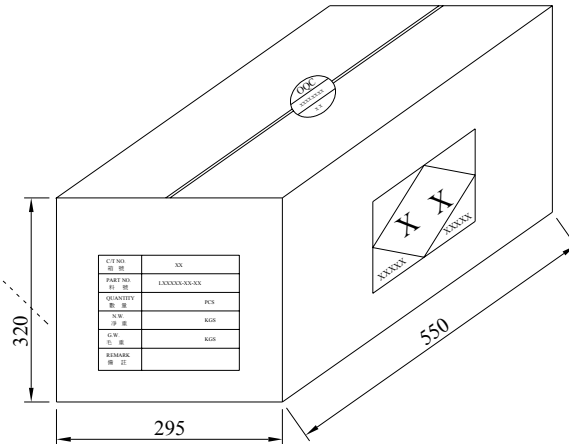
INNER BOX
QUANTITY: 50 PACKETS
TOTAL: 50,000 PCS

| | | | | | |
|----------|--------------|------|------|------|-------|
| PART NO. | LXXXX-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: 200,000 PCS

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



Notes:

- 1.All dimensions are in mm, tolerance is±2.0mm unless otherwise noted.
- 2.Specifications are subject to change without notice.