



LEDTECH ELECTRONICS CORP.

(Zone 22) North Guiyuan Rd., West Jixi Rd.,
Duanzhou District, Zhaoqing City, Guangdong
Province, China

TEL:86-758-2877017,2875541,2870651,2877464

FAX:86-758-2878014

Http://www.ledtech.com.tw

SPECIFICATION

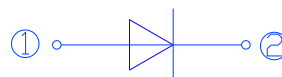
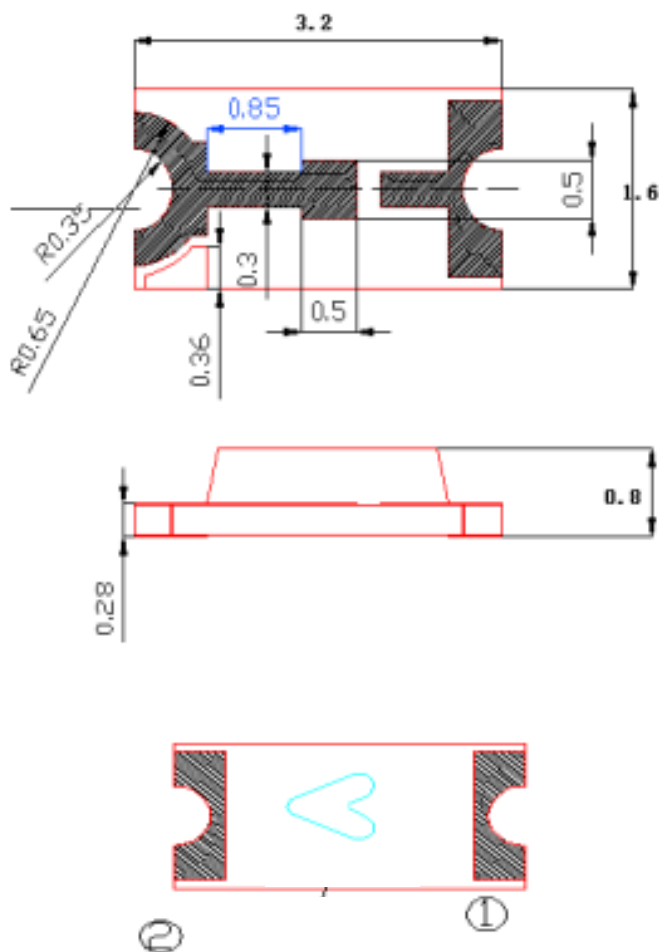
PART NO. : LT8A13-13-1UBC2-GZ21

1206 SMD CHIP LED



| | | |
|-------------|-------------|------------------|
| Approved by | Checked by | Prepared by |
| <i>Yue</i> | <i>Lian</i> | <i>Liang Dai</i> |

Package Dimensions



1. All dimensions are in mm.
2. Tolerance is ± 0.1 mm unless otherwise noted.

Description

| Part No. | LED Chip | | Lens Color |
|----------------------|--------------|----------------|-------------|
| | Material | Emitting Color | |
| LT8A13-13-1UBC2-GZ21 | AlGaInP/GaAs | Hyper Red | Water Clear |



LT8A13-13-1UBC2-GZ21

1206 SMD CHIP LED

Absolute Maximum Ratings at Ta=25 °C

| Parameter | Symbol | Value | Unit |
|---|----------|--|------|
| Power dissipation | Pd | 85 | mW |
| Forward current | If | 25 | mA |
| Reverse voltage | Vr | 5 | V |
| Peak pulsing current | Ifp | 100 | mA |
| Operating temperature | Top | -40 ~+85 | °C |
| Storage temperature | Tstg | -40 ~+100 | °C |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | If(Peak) | 100 | mA |
| Lead Soldering Temperature.(1.6mm from seating plane) | Tsol. | Reflow Soldering: 260°C for 3 sec. Hand Soldering: 350°C for 3 sec. | |
| Electrostatic Discharge | ESD | 2000 | V |

Electrical and Optical Characteristics:

| Parameter | Test Condition | Symbol | Value | | | Unit |
|--------------------------|----------------|----------------------|-------|-----|-----|---------|
| | | | Min | Typ | Max | |
| Luminous intensity | If=20mA | IV | 200 | -- | 290 | mcd |
| Forward voltage | If=20mA | Vf | 1.8 | -- | 2.4 | V |
| Dominate Wavelength | If=20mA | λD | 618 | -- | 628 | mcd |
| Viewing angle at 50% Iv | If=20mA | $2\theta 1/2$ | -- | 140 | -- | Deg |
| Spectral Line Half-width | If=20mA | $\Delta \lambda 1/2$ | -- | 15 | -- | nm |
| Reverse current | Vr=5V | Ir | -- | -- | 5 | μA |

Notes:1. Tolerance of Luminous Intensity is $\pm 15\%$ 2. Tolerance of Forward Voltage is $\pm 0.1V$ 3. Tolerance of Dominant Wavelength is $\pm 1nm$

4. Customer's special requirements are also welcome.



LT8A13-13-1UBC2-GZ21

1206 SMD CHIP LED

Luminous Intensity (Tolerance is $\pm 10\%$ @IF=20mA)

| Rank | Min. | Max. | Unit |
|------|------|------|------|
| 1 | 1.8 | 2.0 | V |
| 2 | 2.0 | 2.2 | |
| 3 | 2.2 | 2.4 | |

Forward Voltage (Tolerance is $\pm 0.05V$ @IF=20mA)

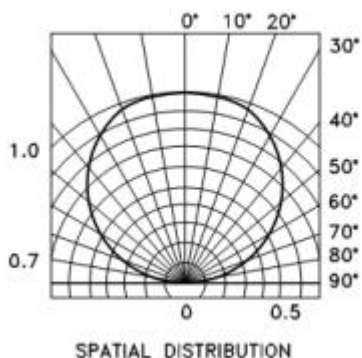
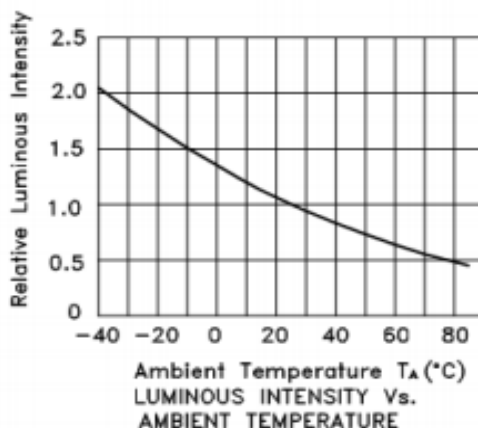
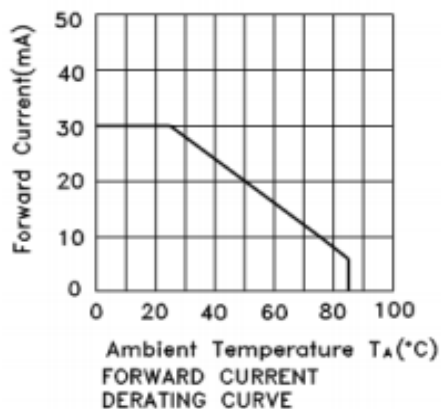
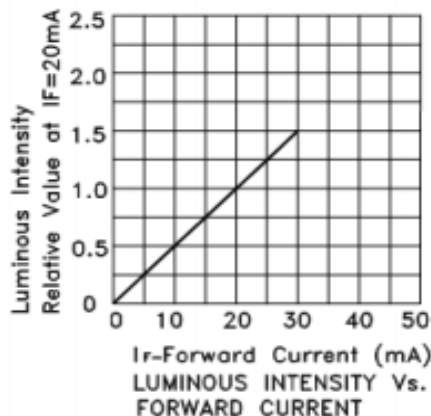
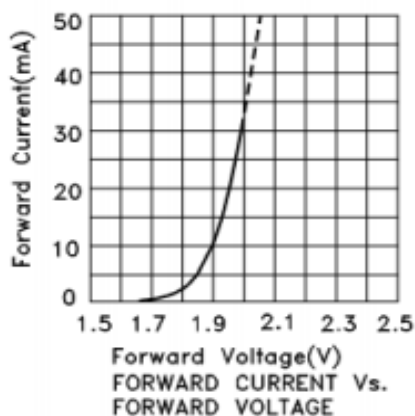
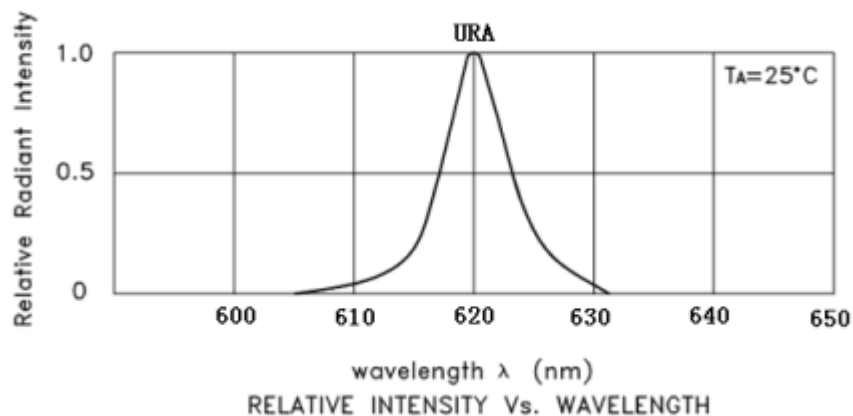
| Rank | Min. | Max. | Unit |
|------|------|------|------|
| 1 | 200 | 240 | mcd |
| 2 | 240 | 290 | |

Dominant Wavelength (Tolerance is $\pm 0.5nm$ @IF=20mA)

| Rank | Min. | Max. | Unit |
|------|------|------|------|
| 1 | 618 | 623 | nm |
| 2 | 623 | 628 | |

Typical Electrical/Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)



Precautions in Use:

Storage

It is recommended to store the products in the following conditions:

1. Do not open the moisture proof bag before ready to use the LEDs
2. The LEDs should be kept at 30°C or less and 60%RH or less before opening the package. The max. storage period before opening the package is 1 year.
3. After opening the package, the LEDs should be kept at 30°C/40%RH or less, and it should be used within 7 days
4. If the LEDs be kept over the condition of 3, baking is required before mounting. Baking condition as below: 60±5°C for 24 hours

Hand Soldering

The temperature of the iron should be lower than 300°C and soldering within 3sec per solder-pad is to be observed.

Cleaning

Surface condition of this device may change when organic solvents such as trichloroethylene or acetone were applied.

Avoid using organic solvent.

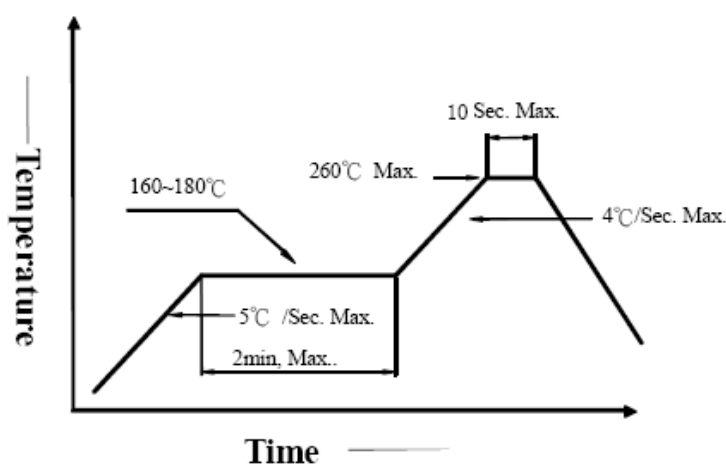
Recommend ultrasonic method 300W Max.

Packaging

EIA-481A standard package.

In 8mm tape on 3000 pcs diameter reels sealed in vapor/ESD barrier bags.

Reflow Temp/Time:



Notes:

1. Reflow soldering should not be done more than two times.
2. Do not put stress on the LEDs when soldering.
3. Do not warp the circuit board before it have been returned to normal ambient conditions after soldering.

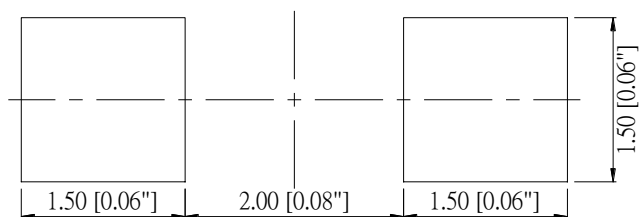
Sulfur-sensitive

- **There is silver-plated metal part on the inner/outer side of the outer package.
If exposed to the condition with corrosive gas, the silver plating surface may go bad, which will affect soldering strength and optical properties. Therefore, after opening it must be kept in a sealed container, etc.**
- **Materials contain sulfur component (gasket, adhesive, etc.) may have bad effects on the surface of the coating, so please do not use such materials in the product.**
- **In cardboard boxes and rubber, even in the atmosphere may contain minute amount of corrosive gases; In addition, the resin material may also contain halogen which has a bad effect on the surface of the coating.**
- **Even if the soldering installation and product assembly finished, by the effect of corrosive gas generated by relative materials of LED and external injected, the coating surface may go bad, so it is necessary to design the product taking into account the above factors.**
- **If requires, it is best to use a silicone washer, but be aware that low molecular silicone may cause the product poor contact.**
- **Keep the product in location where has less temperature change, because moisture condensation would be generated under a condition of strong temperature change.**

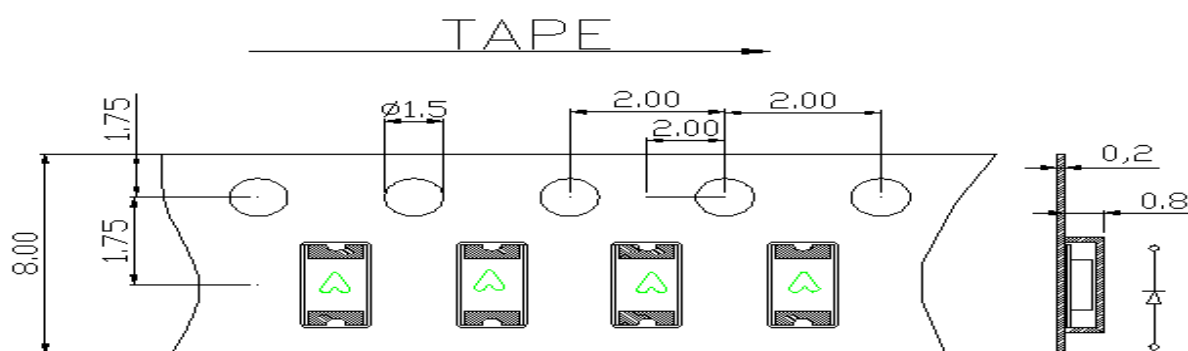
DISCLAIMER

- 1. Our department reserves the right(s) on the adjustment of product material mix for the specification.**
- 2. The product meets our department published specification for a period of twelve (12) months from date of shipment.**
- 3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.**
- 4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Our department assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.**
- 5. These specification sheets include materials protected under copyright of our department. Reproduction in any form is prohibited without obtaining our department's prior consent.**
- 6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized our department sales agent for special application request.**

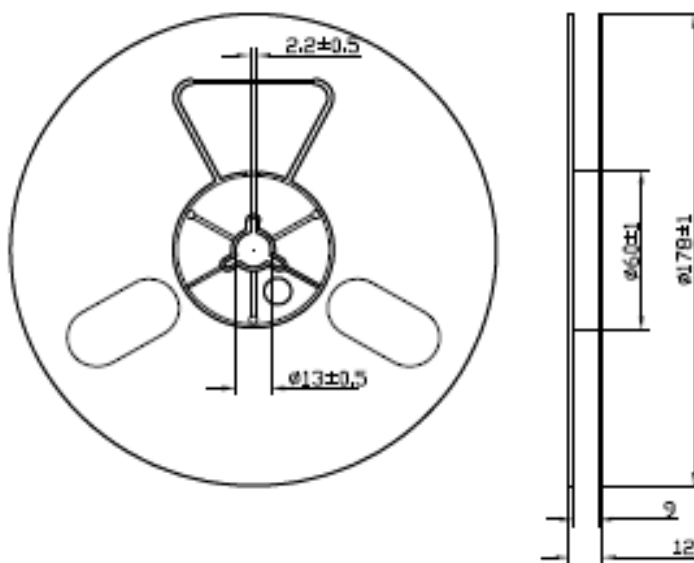
Reflow Soldering Pad Dimensions



Dimensions for Tape



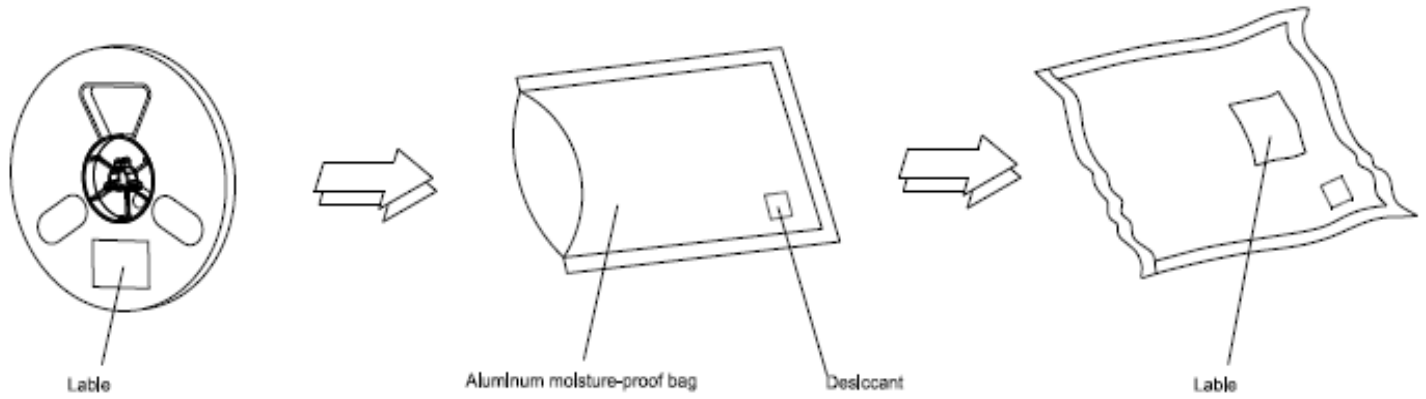
Dimensions for Reel



Notes:

1.3000 pcs/Reel.

Dimensions for Tape



Note: The tolerances unless mentioned is ± 0.1 mm, Unit: mm