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# SPECIFICATION

*PART NO. : LT8A42-43-T4*

*0805 SMD CHIP LED*



Approved by

Checked by

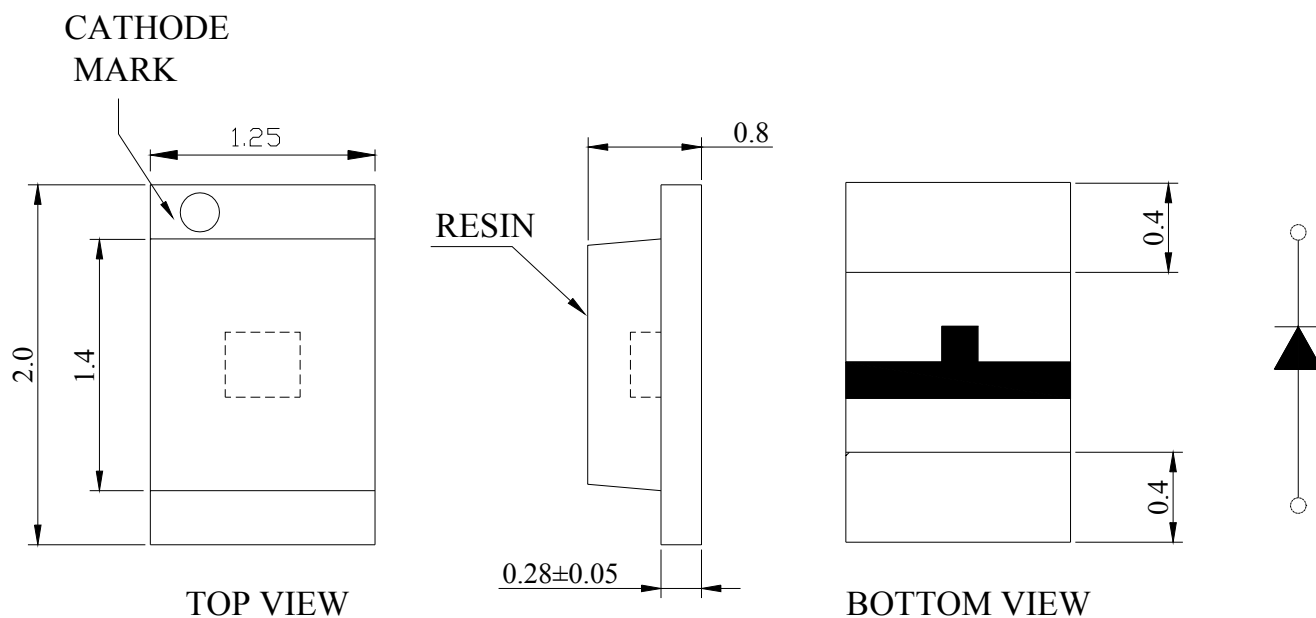
Prepared by

*Tung*

*Andy*

*Karen*

## Package Dimensions



### Notes:

1. All dimensions are in mm.
2. Tolerance is  $\pm 0.1$  mm unless otherwise noted.

## Description

| Part No.     | LED Chip  |                | Lens Color     |
|--------------|-----------|----------------|----------------|
|              | Material  | Emitting Color |                |
| LT8A42-43-T4 | GaAsP/GaP | Orange         | White diffused |

**Absolute Maximum Ratings at Ta=25 °C**

| Parameter                                       | Symbol                | Rating                             | Unit |
|-------------------------------------------------|-----------------------|------------------------------------|------|
| Power Dissipation                               | P <sub>D</sub>        | 78                                 | mW   |
| Reverse Voltage                                 | V <sub>R</sub>        | 5                                  | V    |
| D.C. Forward Current                            | I <sub>f</sub>        | 30                                 | mA   |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | I <sub>f</sub> (Peak) | 80                                 | mA   |
| Operating Temperature Range                     | T <sub>opr.</sub>     | -30 to +80                         | °C   |
| Storage Temperature Range                       | T <sub>stg.</sub>     | -40 to +85                         | °C   |
| Soldering Temperature.                          | T <sub>sol.</sub>     | Reflow Soldering:260°C for 10 sec. |      |

**Electrical and Optical Characteristics:**

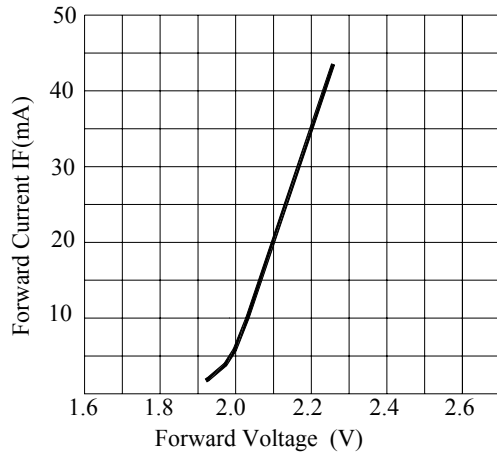
| Parameter               | Symbol         | Condition            | Min. | Typ. | Max. | Unit |
|-------------------------|----------------|----------------------|------|------|------|------|
| Luminous Intensity      | I <sub>v</sub> | I <sub>f</sub> =20mA |      | 7    |      | mcd  |
| Forward Voltage         | V <sub>f</sub> | I <sub>f</sub> =20mA |      | 2.1  | 2.6  | V    |
| Peak Wavelength         | λ <sub>p</sub> | I <sub>f</sub> =20mA |      | 635  |      | nm   |
| Dominant Wavelength     | λ <sub>d</sub> | I <sub>f</sub> =20mA |      | 626  |      | nm   |
| Reverse Current         | I <sub>r</sub> | V <sub>R</sub> =5V   |      |      | 100  | μA   |
| Viewing Angle           | 2 θ 1/2        | I <sub>f</sub> =20mA |      | 140  |      | deg  |
| Spectrum Line Halfwidth | Δλ             | I <sub>f</sub> =20mA |      | 35   |      | nm   |

Notes:1.The datas tested by IS tester.

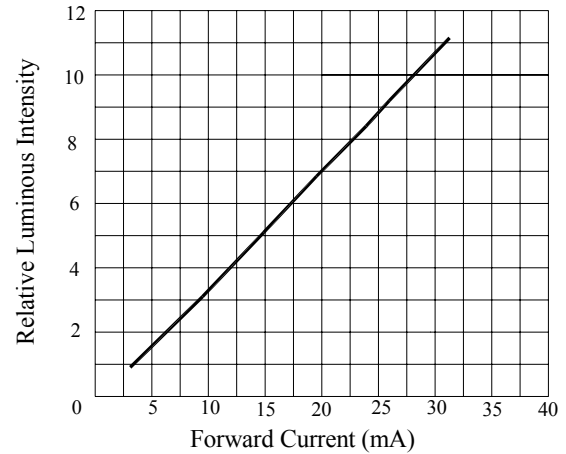
2. Customer's special requirements are also welcome.

# **Typical Electrical/Optical Characteristic Curves**

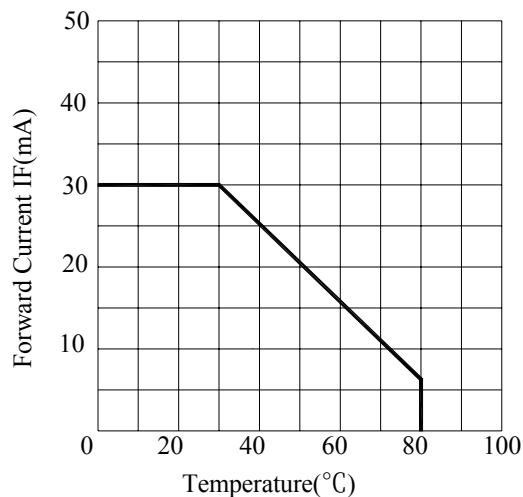
**(25°C Ambient Temperature Unless Otherwise Noted)**



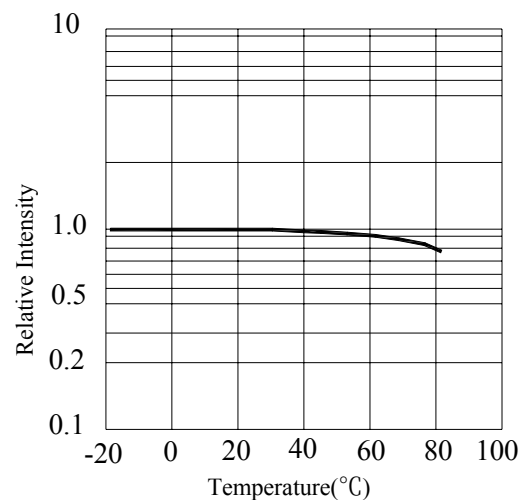
**FORWARD CURRENT VS. APPLIED VOLTAGE**



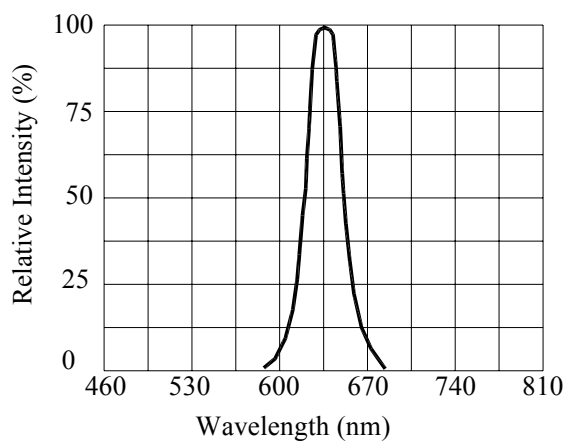
**RELATIVE INTENSITY VS. FORWARD CURRENT**



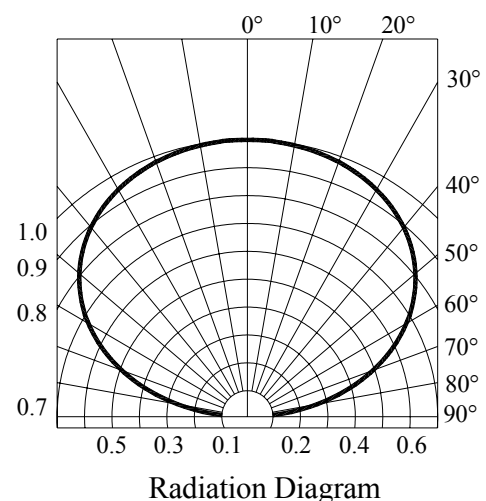
**FORWARD CURRENT VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. WAVELENGTH**



**Radiation Diagram**

## Precautions in Use:

### Storage

Recommend 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 :  $60 \pm 5^{\circ}\text{C}$  for 24 hours.

Fold the opened bag firmly and keep in dry environment.

### Soldering

#### Reflow Soldering

Recommend use of upper and lower heater type reflow furnace.

260°C Max for up to 10 seconds, one time only.

Pre-heat is 150°C Max for up to 2 minutes Max.

In case of screen-printing, keep metal mask thickness between 0.2mm and 0.3mm.

### Cleaning

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

Avoid using organic solvent.

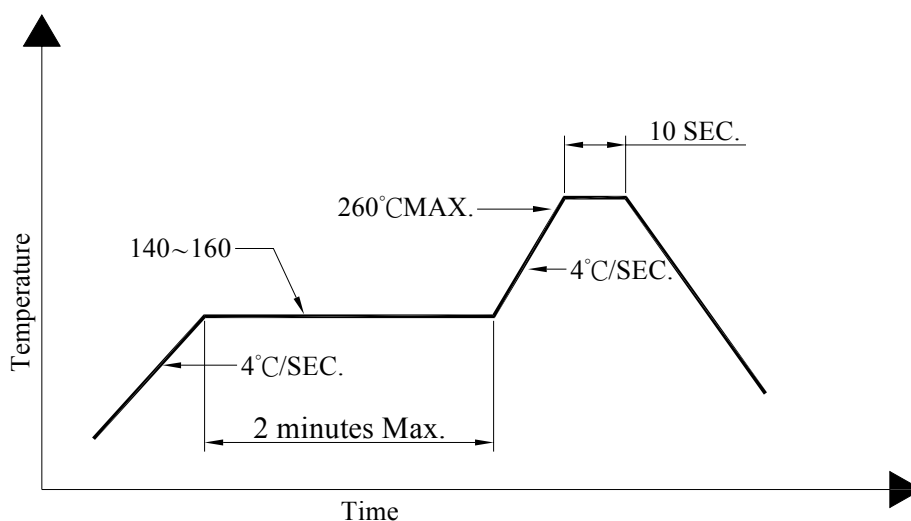
Recommend ultrasonic method 300W Max.

### Packaging

EIA-481A standard package.

In 8mm tape on 4000 pcs diameter reels sealed in vapor/ESD barrier bags.

## Reflow Temp/Time:

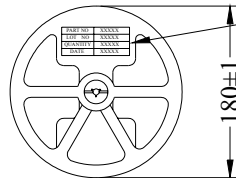


Technical drawing of a cathode compartment. The top view shows a rectangular compartment with a width of  $8.0^{+0.30}_{-0.10}$  and a length of  $4.0 \pm 0.1$ . The compartment contains five circular cathodes with a diameter of  $\varnothing 1.5^{+0.1}_{-0}$ . The distance between the cathodes is  $2.0 \pm 0.05$ . The distance from the left wall to the first cathode is  $4.0 \pm 0.1$ . The distance from the last cathode to the right wall is  $1.75 \pm 0.1$ . The distance from the bottom wall to the cathodes is  $3.5 \pm 0.05$ . The left wall is labeled "CATHODE". The side view shows a cross-section of the compartment with a height of  $2.26 \pm 0.10$  and a width of  $0.90 \pm 0.1$ . The bottom view shows a cross-section of the compartment with a width of  $1.40 \pm 0.1$ .

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

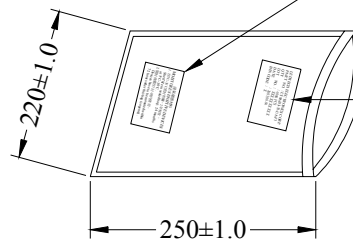
## Dimensions for Tape

**Reel : 4,000PCS**



|          |        |
|----------|--------|
| PART NO  | XXXXXX |
| LOT NO   | XXXXXX |
| QUANTITY | XXXXXX |
| DATE     | XXXXXX |
| BIN CODE | XXXXXX |

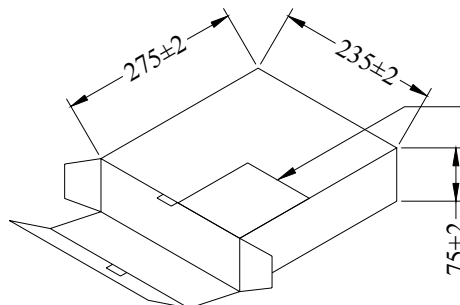
**Bag : 4,000PCS**



溼氣敏感材料  
MOISTURE SENSITIVE DEVICES  
1. 在5°C~30°C密封貯藏，2年有效。  
Shelf life in sealed bag : 24 months  
at 5°C~30°C.  
2. 開封後需在168小時內使用。  
Devices have to be mounted within  
168 hours after this bag is opened .

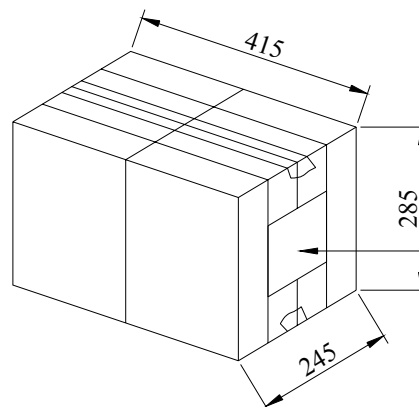
|          |        |
|----------|--------|
| PART NO  | XXXXXX |
| LOT NO   | XXXXXX |
| QUANTITY | XXXXXX |
| DATE     | XXXXXX |
| BIN CODE | XXXXXX |

**5 Bags : 20,000PCS**



|          |        |
|----------|--------|
| PART NO  | XXXXXX |
| LOT NO   | XXXXXX |
| BIN CODE | XXXXXX |
| QUANTITY | XXXXXX |
| DATE     | XXXXXX |

**5 Boxes : 100,000PCS**



|          |        |
|----------|--------|
| C/T NO   | XXXXXX |
| PART NO  | XXXXXX |
| QUANTITY | XXXXXX |
| N. W.    | XXXXXX |
| G. W.    | XXXXXX |
| REMARK   | XXXXXX |

### Notes:

- 1.7 inch reel-4000 pieces per reel.
- 2.Minimum packing quantity is 500 pieces for remainders.
- 3.The maximum number of consecutive missing lamps is two.