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# SPECIFICATION

*PART NO. : LT8A22-43-T4*

*0805 SMD CHIP LED*



Approved by

Checked by

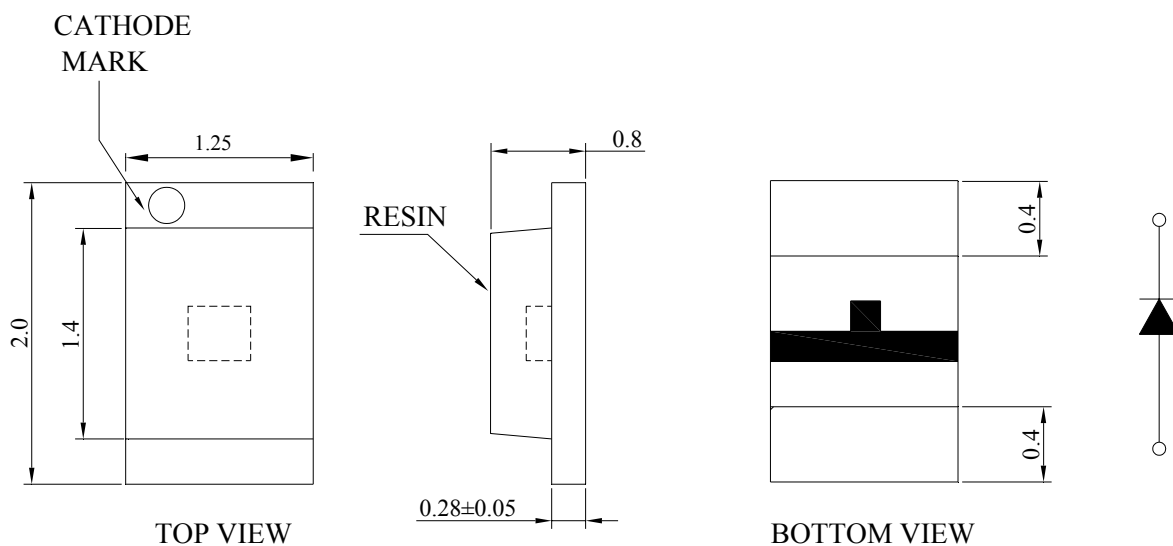
Prepared by

*Tung*

*Lian*

*Show*

## Package Dimensions



### Notes:

1. All dimensions are in mm.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without notice.
3. Tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted.

## Description

| Part No.     | LED Chip |                | Lens Color     |
|--------------|----------|----------------|----------------|
|              | Material | Emitting Color |                |
| LT8A22-43-T4 | GaP/GaP  | Yellow Green   | 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 | 5.16 | 11   |      | mcd  |
| Forward Voltage         | V <sub>f</sub> | I <sub>f</sub> =20mA | 1.9  |      | 2.6  | V    |
| Peak Wavelength         | λ <sub>p</sub> | I <sub>f</sub> =20mA |      | 567  |      | nm   |
| Dominant Wavelength     | λ <sub>d</sub> | I <sub>f</sub> =20mA |      | 572  |      | 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 |      | 30   |      | nm   |

- Notes: 1.Tolerance of Luminous Intensity is ±15%  
2.Tolerance of Forward Voltage is ±0.1V  
3.Tolerance of Dominant Wavelength is ±1nm  
4.Customer's special requirements are also welcome.

**Product Specification**

|              | Specification                                                                    | Material               | Quantity         |
|--------------|----------------------------------------------------------------------------------|------------------------|------------------|
| Iv           | L: 5.16-7.56mcd<br>M: 7.56-11.0mcd<br>N: 11.0-16.5mcd<br>P:16.5-24.4mcd<br>@20mA |                        |                  |
| $\lambda d$  | 566-577nm<br>@20mA                                                               |                        |                  |
| Vf           | H: 1.9-2.2v<br>J: 2.2-2.4v<br>K:2.4-2.6V<br>@20mA                                |                        |                  |
| Ir           | <100 $\mu$ A @Vr=5V                                                              |                        |                  |
| Resin        | White Diffused                                                                   | Epoxy resin            |                  |
| Carrier tape |                                                                                  | Conductive black tape  | 4000pcs per reel |
| Reel         |                                                                                  | White                  |                  |
| Label        | LT standard                                                                      | Paper                  |                  |
| Packing bag  | 250x220mm                                                                        | Aluminum laminated bag | One reel one bag |
| Carton       | LT standard                                                                      | Paper                  | Non-specified    |
| Others:      |                                                                                  |                        |                  |

Lot No.:

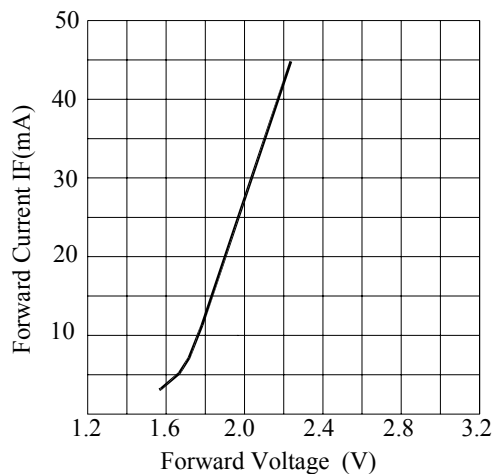
W O Z A 3 0 0 0 6 2  
 ↑                      ↑                      ↑  
 Internal Tracing Code    Mfg. Year    Flowing Code

BIN CODE :

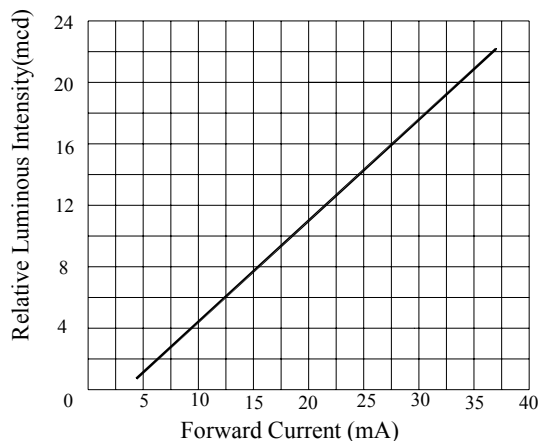
X X - X  
 ↑                      ↑                      ↑  
 IV Rank    VF Rank     $\lambda d$  Rank

# **Typical Electrical/Optical Characteristic Curves**

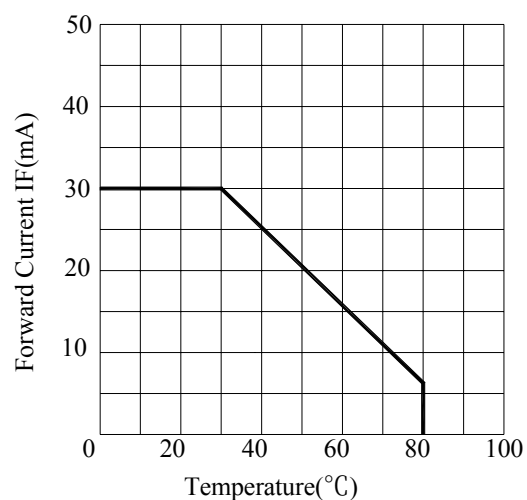
**(25°C Ambient Temperature Unless Otherwise Noted)**



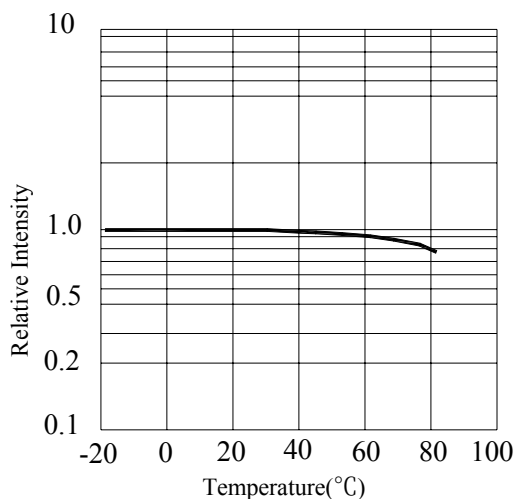
**FORWARD CURRENT VS. APPLIED VOLTAGE**



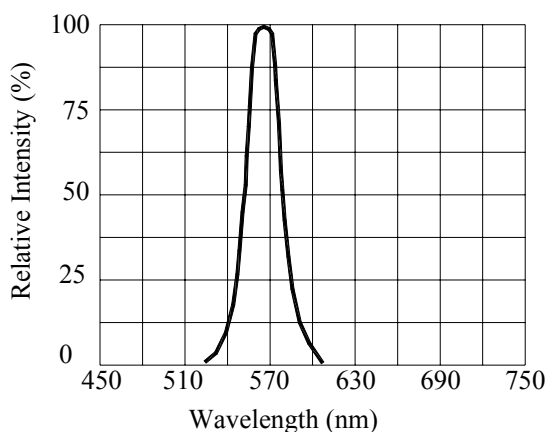
**RELATIVE INTENSITY VS. FORWARD CURRENT**



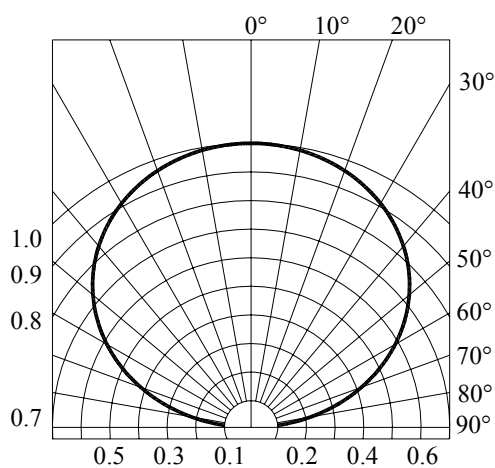
**FORWARD CURRENT VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. WAVELENGTH**



**Radiation Diagram**

## Precautions in Use:

### Storage

Recommend storage environment

Temperature :  $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$  ( $41^{\circ}\text{F} \sim 86^{\circ}\text{F}$ )

Humidity : 60% RH Max.

Moisture measures: Please refer to Moisture-sensitive label on reels package bags.

If unused LEDs remain, they should be stored in moisture proof packages, such as sealed container with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

Fold the opened bag firmly and keep in dry environment.

### Soldering

#### Reflow Soldering

Recommend use of upper and lower heater type reflow furnace.

$260^{\circ}\text{C}$  Max for up to 10 seconds, one time only.

Pre-heat is  $150^{\circ}\text{C}$  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.

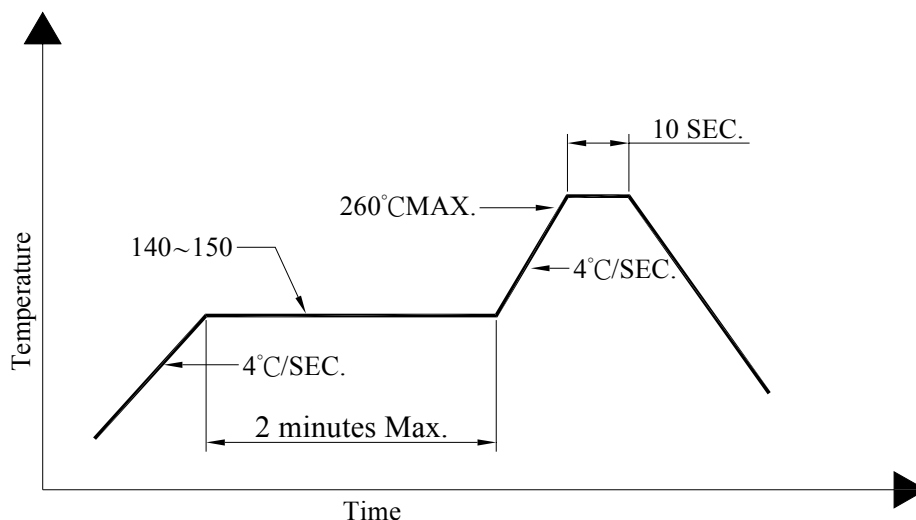
Recommend ultrasonic method 300W Max.

### Packaging

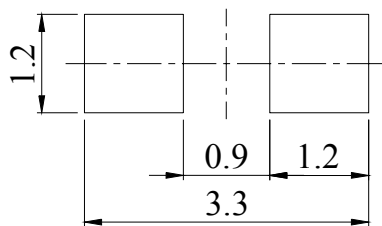
EIA-481A standard package.

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

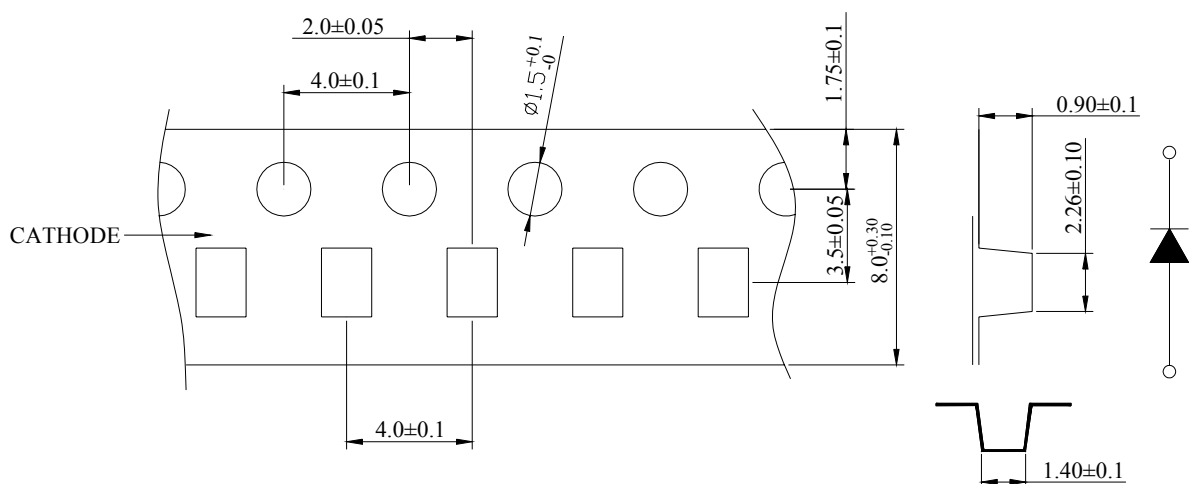
## Reflow Temp/Time:



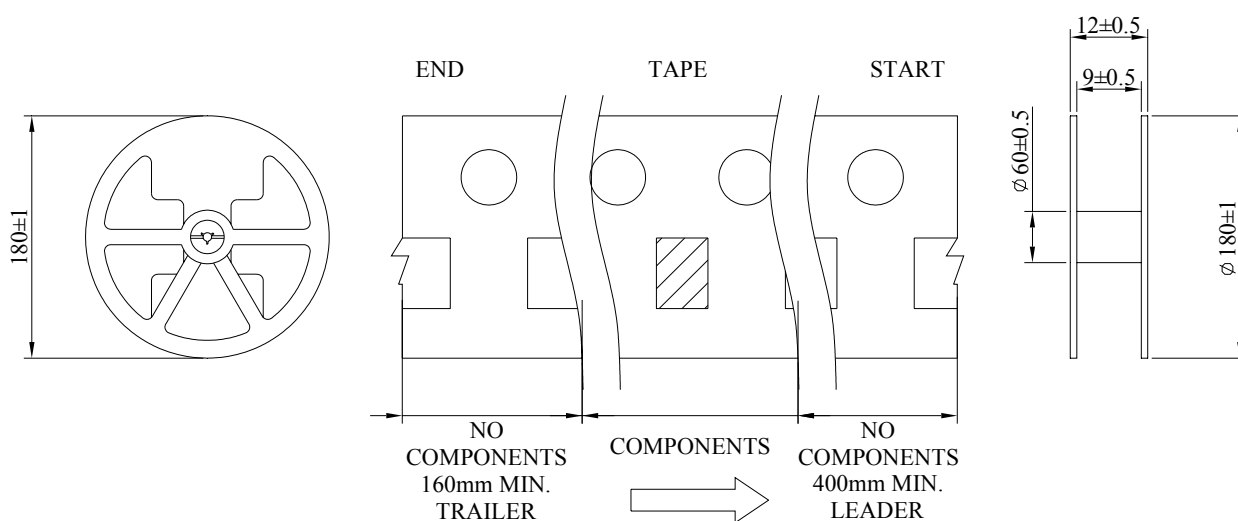
## Reflow Soldering Pad Dimensions



## Dimensions for Tape



## Dimensions for Reel

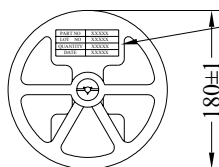


### Notes:

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2. Specifications are subject to change without notice.

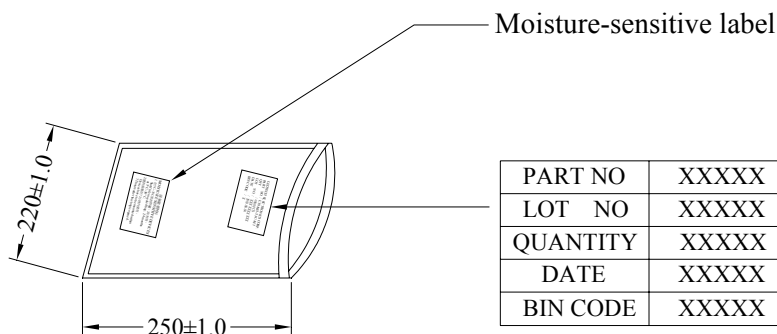
## Dimensions for Tape

**Reel : 4,000PCS**



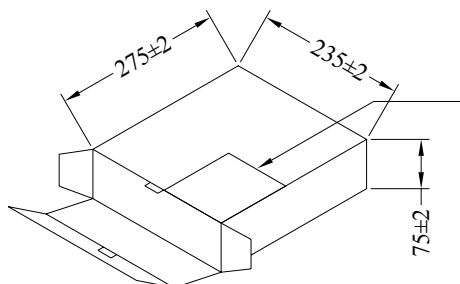
|          |        |
|----------|--------|
| PART NO  | XXXXXX |
| LOT NO   | XXXXXX |
| QUANTITY | XXXXXX |
| DATE     | XXXXXX |
| BIN CODE | XXXXXX |

**Bag : 4,000PCS**



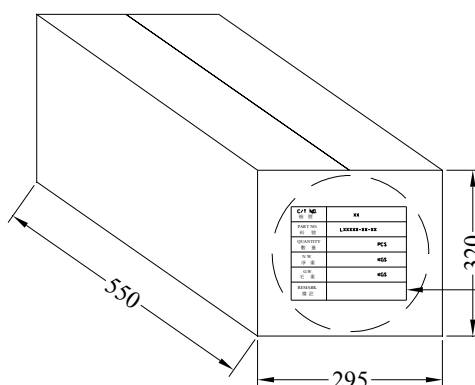
|          |        |
|----------|--------|
| PART NO  | XXXXXX |
| LOT NO   | XXXXXX |
| QUANTITY | XXXXXX |
| DATE     | XXXXXX |
| BIN CODE | XXXXXX |

**5 Bags : 20,000PCS**



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

**8 Boxes : 160,000PCS**



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

### 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.