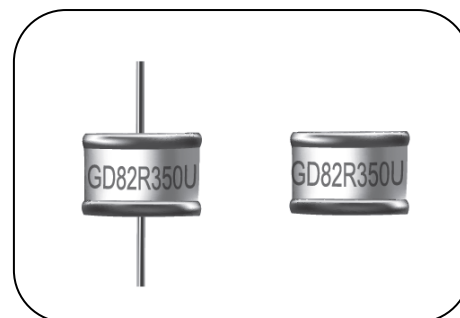


# Gas Discharge Tube: GD8-U Series *α Therm*

## 2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

### ■ Features

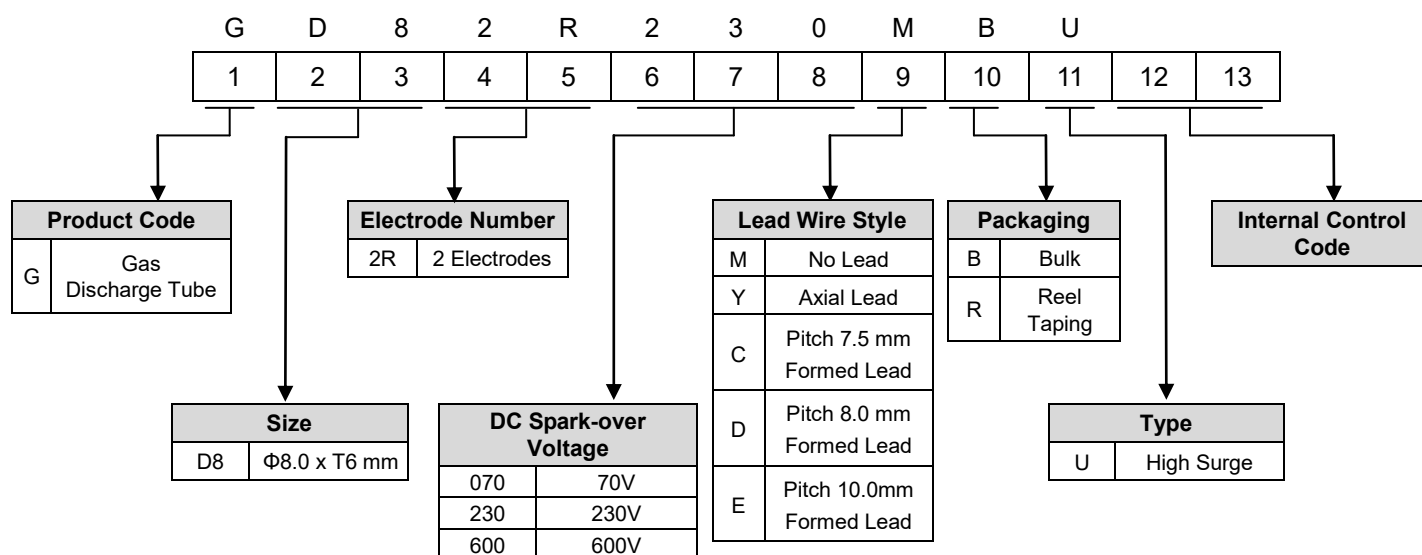
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. DC spark-over voltage: 70V ~600V
5. Low capacitance
6. High transient current capability
7. Agency recognition: UL / cUL
8. Operating temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



### ■ Recommended Applications

1. Cable modem
2. xDSL
3. Set-top box
4. TV sets
5. Power supply
6. Consumer electronics

### ■ Part Number Code



# Gas Discharge Tube: GD8-U Series



## 2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

### ■ Characteristics

| Part No.  | DC Spark-over Voltage | Max. Impulse Breakdown Voltage |              | Max. Impulse Discharge Current (8/20 $\mu$ s) |          | Impulse Life (10/1000 $\mu$ s) | Normal Alternating Discharge Current | DC Holdover Voltage | Minimum Insulation Resistance | Maximum Capacitance (1MHz) | Safety Approvals |         |
|-----------|-----------------------|--------------------------------|--------------|---|----------|--------------------------------|--------------------------------------|---------------------|-------------------------------|----------------------------|------------------|---------|
|           | 100V/S                | 100V/ $\mu$ s                  | 1KV/ $\mu$ s | 1 time  | 10 times | 100A                           | 50Hz, 1Sec                           | <150ms              |                               |                            | UL 497 B         | UL 1449 |
|           | (V)                   | (V)                            | (V)          | (KA)  |          | (Times)                        | (A)                                  | (V)                 |                               |                            |                  |         |
| GD82R070□ | 70 $\pm$ 20%          | 500                            | 600          | 25  | 20       | 500                            | 20                                   | 52                  | 10                            | 1.5                        | √                |         |
| GD82R075□ | 75 $\pm$ 20%          | 500                            | 600          |   |          |                                |                                      | √                   |                               |                            |                  |         |
| GD82R090□ | 90 $\pm$ 20%          | 500                            | 600          |   |          |                                |                                      | √                   |                               |                            |                  |         |
| GD82R120□ | 120 $\pm$ 15%         | 500                            | 700          |   |          |                                |                                      | √                   |                               |                            |                  |         |
| GD82R130□ | 130 $\pm$ 15%         | 500                            | 700          |   |          |                                |                                      | √                   |                               |                            |                  |         |
| GD82R145□ | 145 $\pm$ 15%         | 500                            | 700          |   |          |                                |                                      | √                   |                               |                            |                  |         |
| GD82R230□ | 230 $\pm$ 15%         | 500                            | 700          |   |          |                                |                                      | 80                  |                               |                            | √                |         |
| GD82R250□ | 250 $\pm$ 15%         | 500                            | 700          |   |          |                                |                                      | 135                 |                               |                            | √                |         |
| GD82R300□ | 300 $\pm$ 15%         | 700                            | 900          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GD82R350□ | 350 $\pm$ 15%         | 700                            | 900          |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GD82R400□ | 400 $\pm$ 15%         | 800                            | 1000         |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GD82R470□ | 470 $\pm$ 15%         | 900                            | 1100         |   |          |                                |                                      | 150                 |                               |                            | √                |         |
| GD82R600□ | 600 $\pm$ 15%         | 1100                           | 1300         |   |          |                                |                                      | 150                 |                               |                            | √                | √       |

Note1: The first □ is style of lead wire, and the second □ is packaging.

Note2: H = High Surge Series

Note3: UL 497B File No. E245070

Note 4: Insulation resistance test conditions:

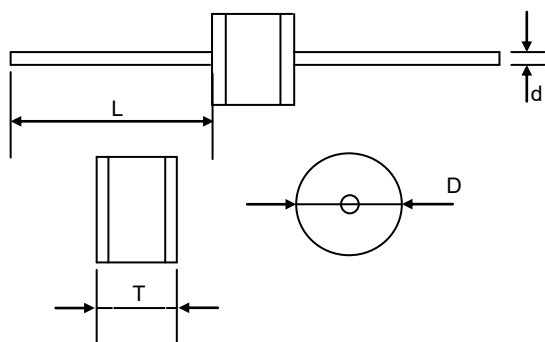
| DC Spark-over Voltage | DC Measuring Voltage |
|-----------------------|----------------------|
| 70-90V                | 50V                  |
| 120-400V              | 100V                 |
| 470-600V              | 250V                 |

# Gas Discharge Tube: GD8-U Series *α Therm*

## 2-Electrode Φ8.0 x T6 mm High Surge Type

### ■ Dimension

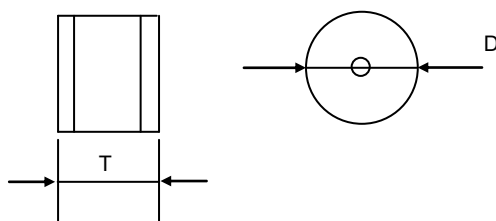
□ = Y (Axial Lead Type)



(Unit: mm)

| Item | Dimensions |           |
|------|------------|-----------|
|      | Spec.      | Tolerance |
| D    | 8.0        | +0.3/-0.5 |
| T    | 6.0        | +0.3/-0.5 |
| L    | 20         | Min.      |
| d    | 0.8        | ±0.05     |

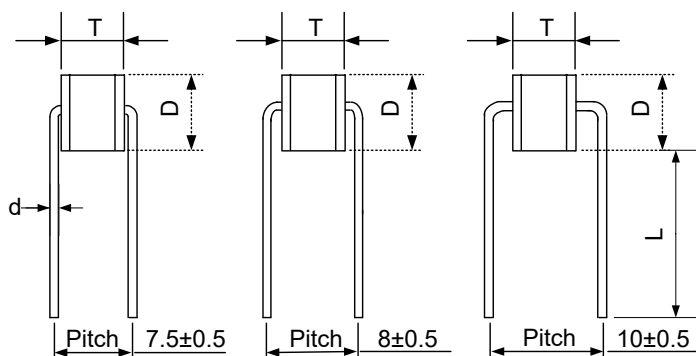
□ = M (No Lead Type)



(Unit: mm)

| Item | Dimensions |           |
|------|------------|-----------|
|      | Spec.      | Tolerance |
| D    | 8.0        | +0.3/-0.5 |
| T    | 6.0        | +0.3/-0.5 |

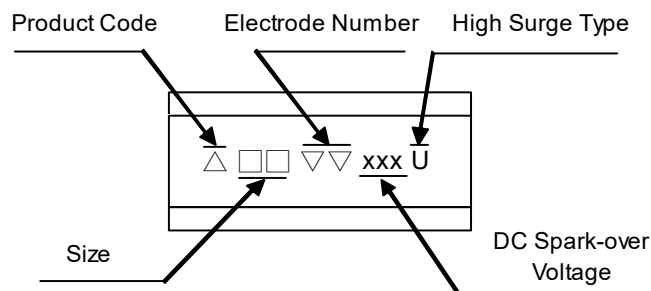
□ = C, D, or E (Formed Lead)



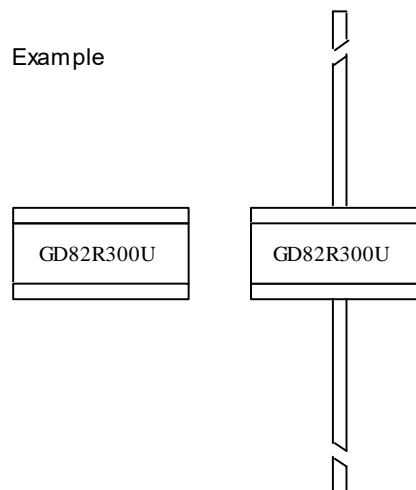
(Unit: mm)

| Item | Dimensions |           |
|------|------------|-----------|
|      | Spec.      | Tolerance |
| D    | 8.0        | +0.3/-0.5 |
| T    | 6.0        | +0.3/-0.5 |
| d    | 1.0        | ±0.05     |
| L    | 15.0       | Min.      |
| P    | 7.5        | ±0.5      |
|      | 8          | ±0.5      |
|      | 10         | ±0.5      |

### ■ Marking



Example



# Gas Discharge Tube: GD8-U Series *α Therm*

## 2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

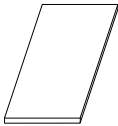
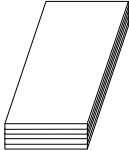
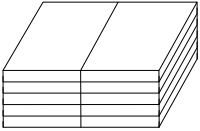
### ■ Packaging

#### ● Bulk

- ◆ For No Lead (M Type) and Axial Lead (Y Type):

**Quantity: 500pcs per Inner Box**

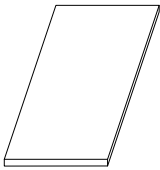
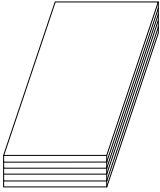
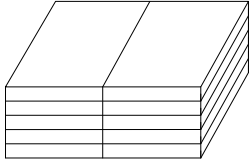
(Unit: mm)

| Item       | PS Box  | Inner Box   | Outside Box   |
|------------|---|---|---|
| Dimensions | 252×135×10mm  | 270×145×50mm  | 300×245×180mm   |
| Drawing    |  |  |  |
| Quantity   | 100pcs / PS Box   | 500pcs / Inner Box  | 2000pcs / Outside Box   |

- ◆ For Formed Lead (C, D, or E Type) :

**Quantity: 500pcs per Inner Box**

(Unit: mm)

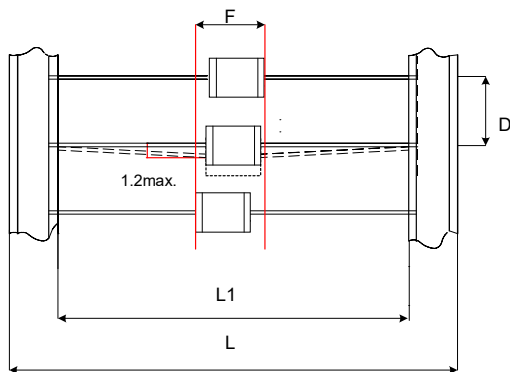
| Item       | PS Box  | Inner Box   | Outside Box   |
|------------|---|---|---|
| Dimensions | 263×144×8mm   | 270×145×50mm  | 300×245×180mm   |
| Drawing    |  |  |  |
| Quantity   | 100pcs / PS Box   | 500pcs / Inner Box  | 2000pcs / Outside Box   |

# Gas Discharge Tube: GD8-U Series *α Therm*

## 2-Electrode $\Phi 8.0$ x T6 mm High Surge Type

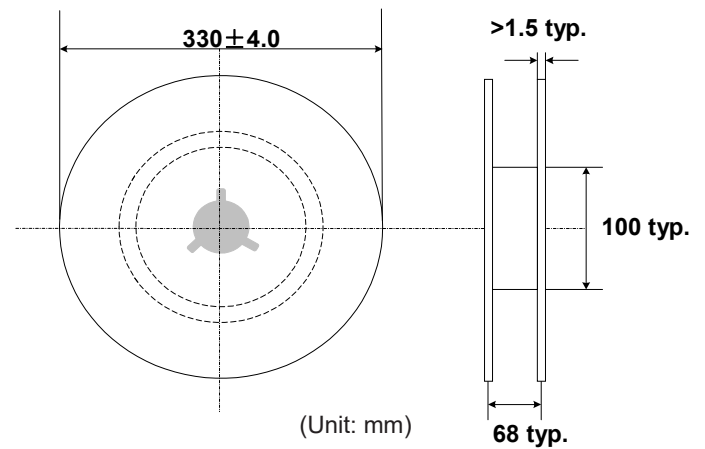
### ● Taping

For 2-electrode Axial Lead GDT: 500 PCS/Reel



(Unit: mm)

| Item | Dimensions |           |
|------|------------|-----------|
|      | Spec.      | Tolerance |
| L1   | 52         | $\pm 2$   |
| L    | 64         | $\pm 3$   |
| D    | 10         | $\pm 0.5$ |
| F    | T + 1.4    | Max.      |



### ■ Warehouse Storage Conditions of Products

- Storage Conditions:
  1. Storage Temperature:  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
  2. Relative Humidity:  $\leq 75\% \text{RH}$
  3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year