

# Gas Discharge Tube: GC82R Series



## 2-Electrode $\Phi 8 \times T8$ mm High Voltage Type

### ■ Features

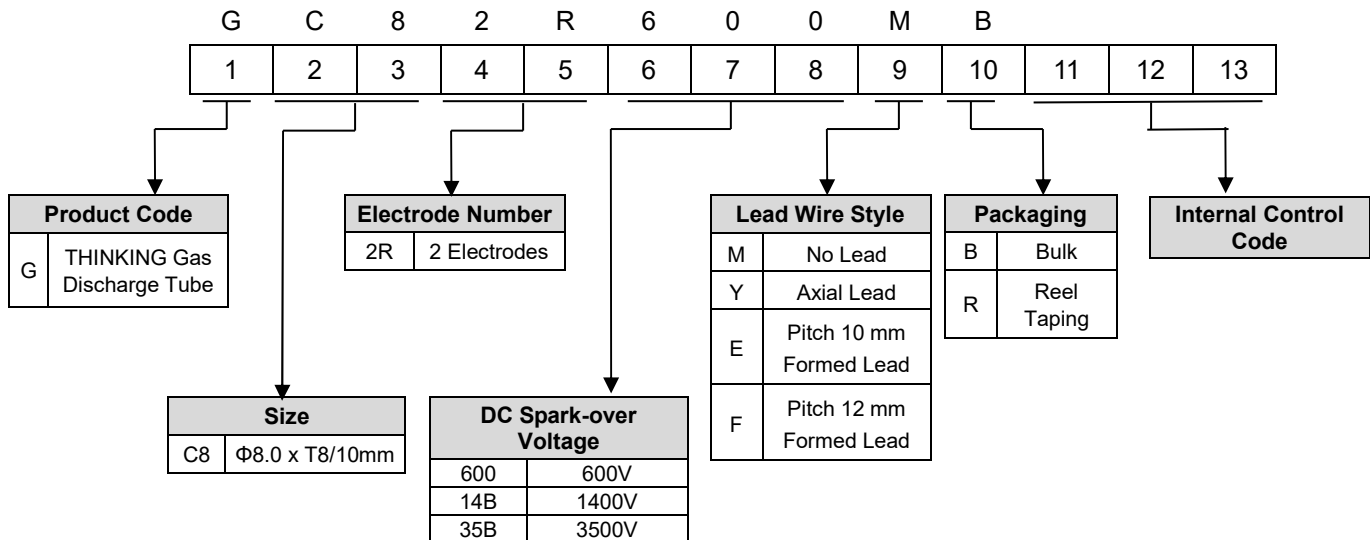
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. DC spark-over voltage: 600~3500V
5. Low capacitance
6. Agency recognition: UL / cUL
7. Operating temperature:  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



### ■ Recommended Applications

1. Modem
2. xDSL splitter
3. CATV system
4. Power supply
5. Consumer electronics
6. Communication lines

### ■ Part Number Code



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### ■ 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	AC withstand voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety Approvals
	100V/S	100V/ $\mu$ s	1KV/ $\mu$ s	1 time	10 times		50Hz, 1Sec	ID=10mA, 1 min			
	(V)	(V)	(V)	(KA)			(Times)	(V)			
GC82R600□□	600 $\pm$ 20%	1000	1100	8	5	100	5	/	1	1.5	√
GC82R800□□	800 $\pm$ 20%	1100	1200					/			√
GC82R10B□□	1000 $\pm$ 20%	1300	1400					/			√
GC82R14B□□	1400 $\pm$ 20%	2100	2200					/			√
GC82R16B□□	1600 $\pm$ 20%	2300	2400					/			√
GC82R20B□□	2000 $\pm$ 20%	2700	2800					1000			√
GC82R25B□□	2500 $\pm$ 20%	3500	3600					1250			√
GC82R27B□□	2700 $\pm$ 20%	3600	3800	5	3	300*	3	1350	1	1.5	√
GC82R30B□□	3000 $\pm$ 20%	4100	4200					1500			√
GC82R35B□□	3500 $\pm$ 20%	4900	5000					100*			2.5

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

Note2: \* means products measured with an 8/20 $\mu$ s waveform, 100A

Note3: UL 1449 4th File No: E314979

Note4: Insulation resistance test conditions:

DC Spark-over Voltage	DC Measuring Voltage
70-150V	50V
151-400V	100V
401-1000V	250V
1001-2000V	500V
>2001V	1000V

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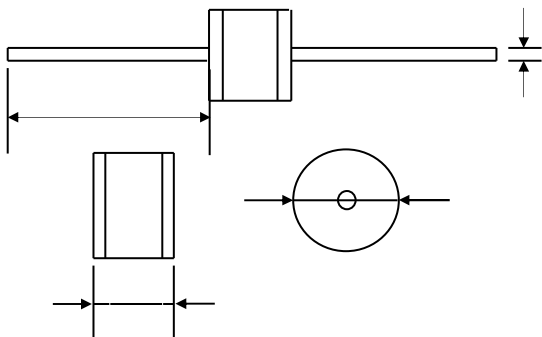


## 2-Electrode $\Phi 8 \times T 8$ mm High Voltage Type

### Dimension

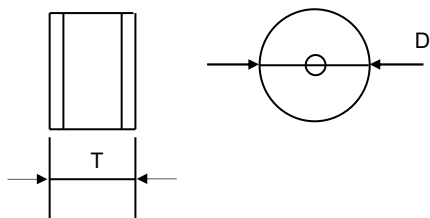
(Unit: mm)

□ = Y (Axial Lead Type)



Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	8.0	+0.6/-0.1
L	20	Min.
d	0.8	$\pm 0.05$

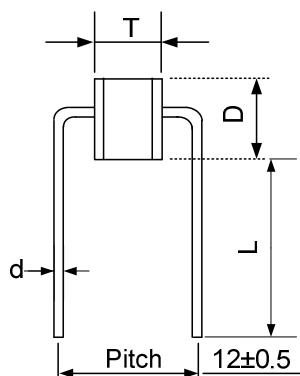
□ = M (No Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	8.0	+0.6/-0.1

□ = E (Formed Lead)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	8.0	+0.6/-0.1
d	0.8	$\pm 0.05$
L	15.0	Min.
P	10.0	$\pm 0.5$

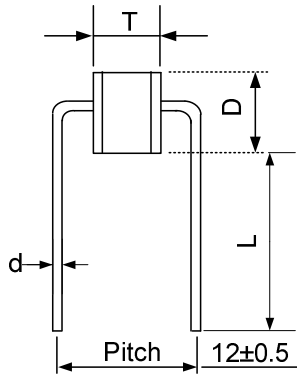
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## 2-Electrode $\Phi 8 \times T 8$ mm High Voltage Type

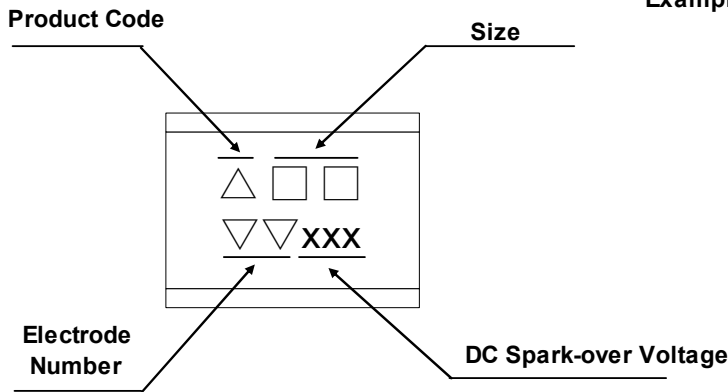
□ = F (Formed Lead)

(Unit: mm)

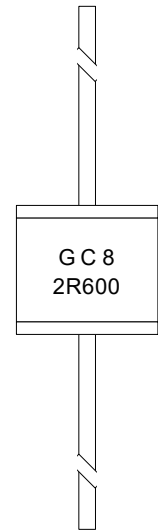
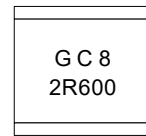


Item	Dimensions	
	Spec	Tolerance
D	8.0	+0.3/-0.5
T	8.0	+0.6/-0.1
d	0.8	±0.05
L	15.0	Min.
P	12	±0.5

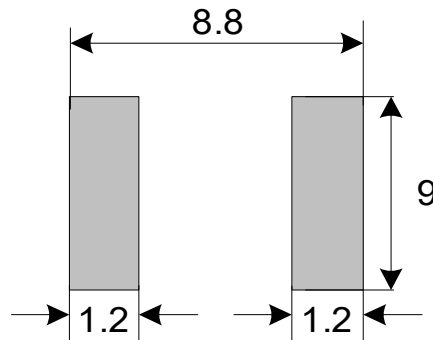
### ■ Marking



Example



### ■ Recommended Pad Size



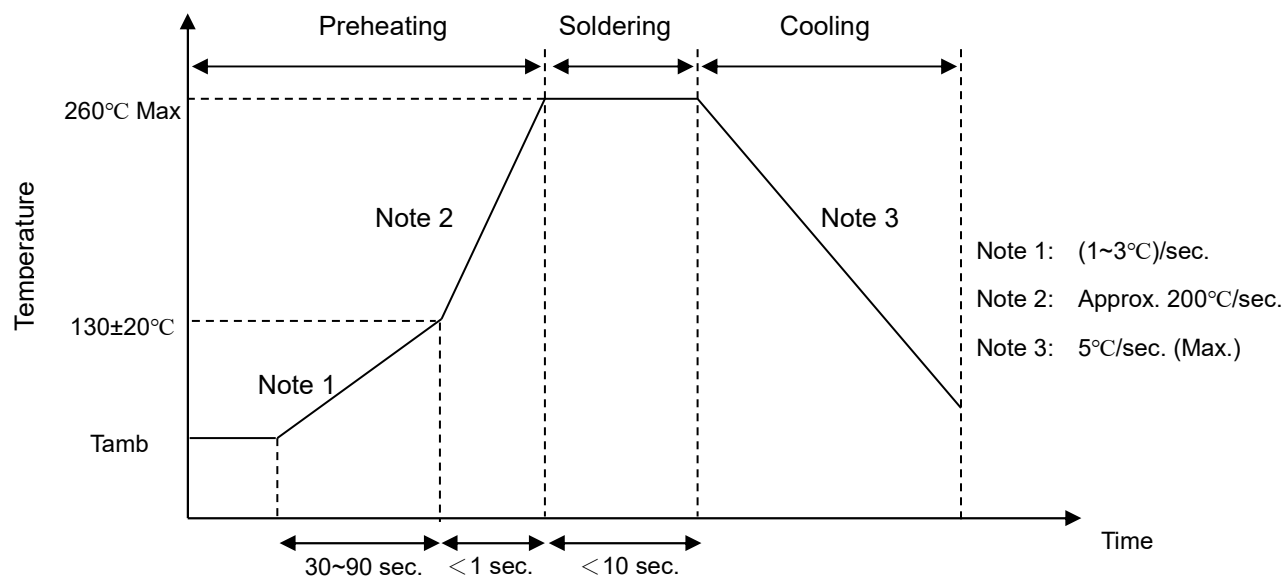
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### ■ Soldering Recommendation

#### ● Wave Soldering Profile



#### ● Recommended Reworking Conditions with Soldering Iron

Item	Condition
Temperature of Soldering Iron-tip	$360^\circ\text{C}$ (max.)
Soldering Time	3 sec. (max.)
Distance from Tube	2 mm (min.)

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### ■ Packaging

#### ● Bulk

- ◆ For 8x8mm Axial Lead (Y Type):

Quantity: 100pcs per PVC Box, 500pcs per Inner Box

Quantity (MPQ): 500pcs

- ◆ For 8x8mm No Lead (M Type) :

Quantity: 100pcs per PVC Box, 500pcs per Inner Box

Quantity (MPQ): 500pcs

- ◆ For 8x8mm Formed Lead (E or F Type) :

Quantity: 100pcs per PVC Box, 500pcs per Inner Box

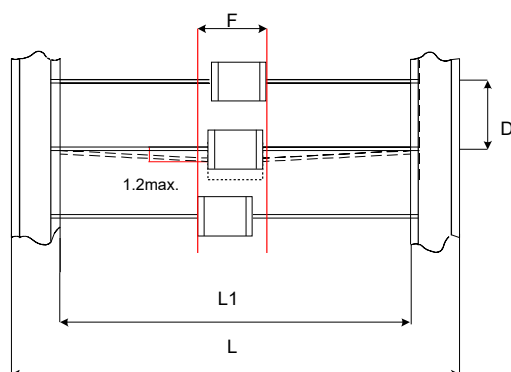
Quantity (MPQ): 500pcs

#### ● Taping

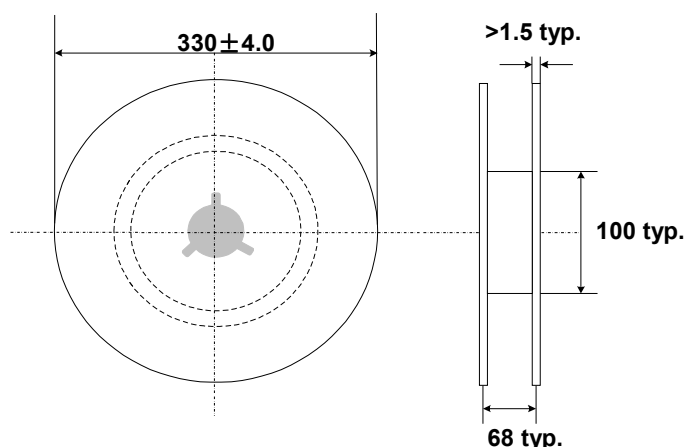
For 2-electrode Axial Lead GDT: 500 PCS/Reel

Quantity (MPQ): 500pcs

(Unit: mm)



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



(Unit: mm)

### ■ 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