

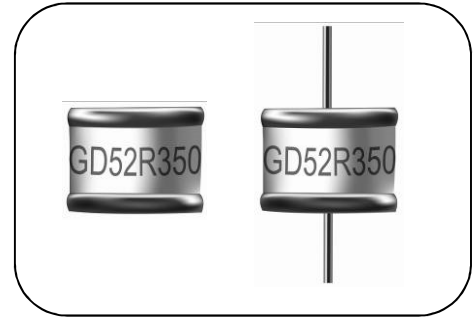
Gas Discharge Tube: GD52R Series



2-Electrode $\Phi 5.5 \times T6$ mm Type

■ Features

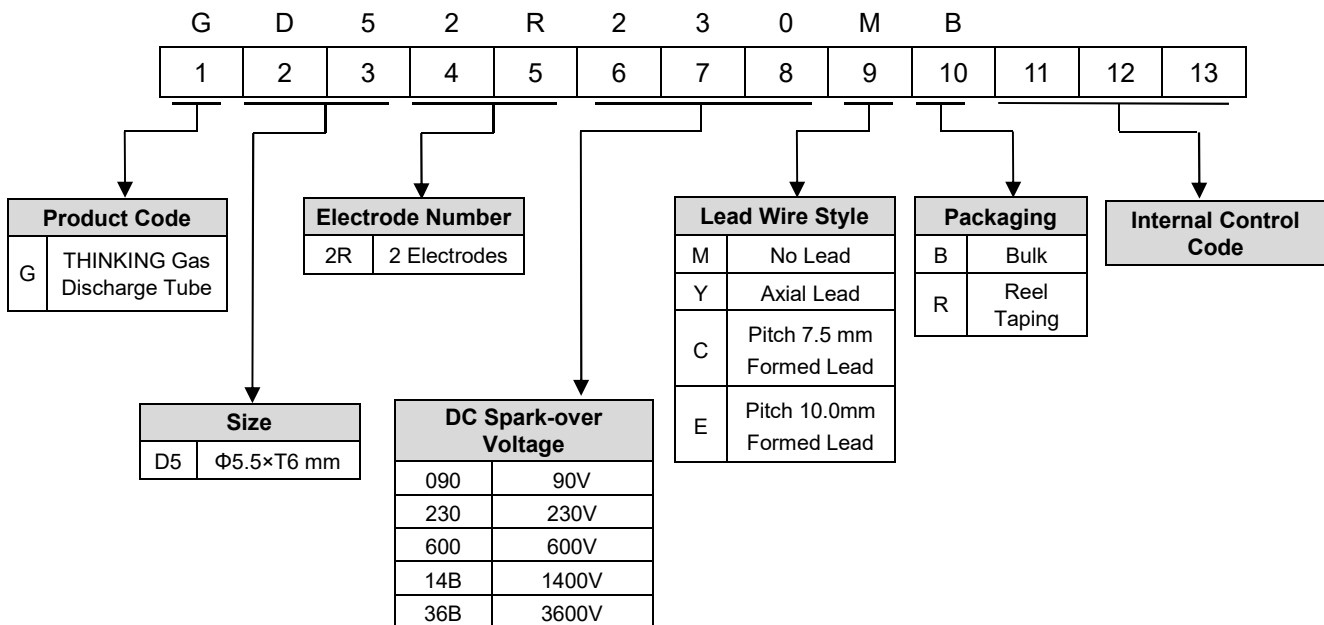
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. Available with or without leads
4. DC spark-over voltage: 90~3600V
5. Low capacitance
6. Agency recognition: UL / cUL / TUV
7. Operating temperature: $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
Storage temperature: $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



■ Recommended Applications

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

■ Part Number Code



Gas Discharge Tube: GD52R Series



2-Electrode $\Phi 5.5$ x T6 mm Type

■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20 μ s)		Impulse Life (10/1000 μ s)	Normal Alternating Discharge Current	AC withstand voltage	DC Holdover Voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety Approvals		
	100V/S	100V/ μ s	1KV/ μ s	1 time	10 times	100A	50Hz, 1 Sec	ID=10mA, 1min	<150ms			UL 1449/cUL	UL 497B	TUV (EN/IEC 61643-311)
	(V)	(V)	(V)	(KA)		(Times)	(A)	(V)	(V)			(G Ω)	(pF)	
GD52R090□□	90 \pm 20%	600	700	10	5	300	5	/	52	1	1		√	√
GD52R120□□	120 \pm 20%	600	700					/	52				√	√
GD52R130□□	130 \pm 20%	600	700					/	52				√	√
GD52R145□□	145 \pm 20%	600	700					/	52				√	√
GD52R230□□	230 \pm 20%	600	700					/	80				√	√
GD52R250□□	250 \pm 20%	600	700					/	80				√	√
GD52R300□□	300 \pm 20%	700	900					/	150				√	√
GD52R350□□	350 \pm 20%	700	900					/	150				√	√
GD52R400□□	400 \pm 20%	800	1000					/	150				√	√
GD52R470□□	470 \pm 20%	900	1100					/	150				√	√
GD52R600□□	600 \pm 20%	1300	1500	5	2.5	2.5	/	150		√	√	√		
GD52R800□□	800 \pm 20%	1500	1700				/	150		√	√	√		
GD52R10B□□	1000 \pm 20%	1600	1800	3	1.5	300*	2	/	150		√		√	
GD52R12B□□	1200 \pm 20%	1800	2000					/	150		√		√	
GD52R14B□□	1400 \pm 20%	2200	2400					/	150		√		√	
GD52R16B□□	1600 \pm 20%	2400	2600					/	150		√		√	
GD52R20B□□	2000 \pm 20%	2800	3000					1000	150		√		√	
GD52R25B□□	2500 \pm 20%	3300	3500					1250	150		√		√	
GD52R30B□□	3000 \pm 20%	3800	4000					1500	150		√		√	
GD52R35B□□	3500 \pm 20%	4300	4500					1750	150		√		√	
GD52R36B□□	3600 \pm 20%	4400	4600					1800	150		√		√	

Note 1: The first □ is style of lead wire, and the second □ is packaging.

Note 2: UL 497B File No: E245070, UL 1449 4th File No: E314979, TUV (EN/IEC 61643-311) File No: J 50659206

Note 3:* means products measured with an 8/20us waveform, 100A

Note 4: Insulation resistance test conditions:

DC Spark-over Voltage	DC Measuring Voltage
90-150V	50V
151-400V	100V
401-1000V	250V
1001-2000V	500V
>2001V	1000V

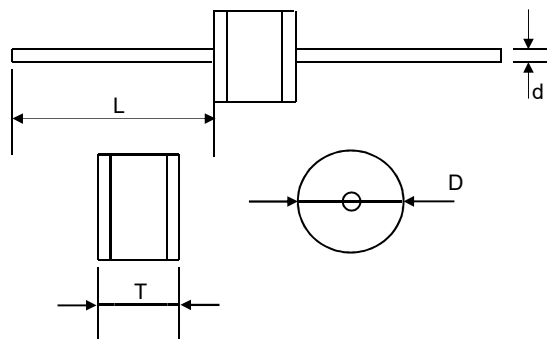
Gas Discharge Tube: GD52R Series



2-Electrode $\Phi 5.5 \times T6$ mm Type

Dimension

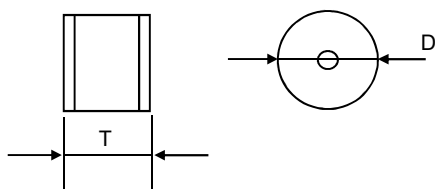
□ = Y (Axial Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	5.5	+0.3/-0.5
T	6.0	+0.3/-0.5
L	20	Min.
d	0.8	± 0.05

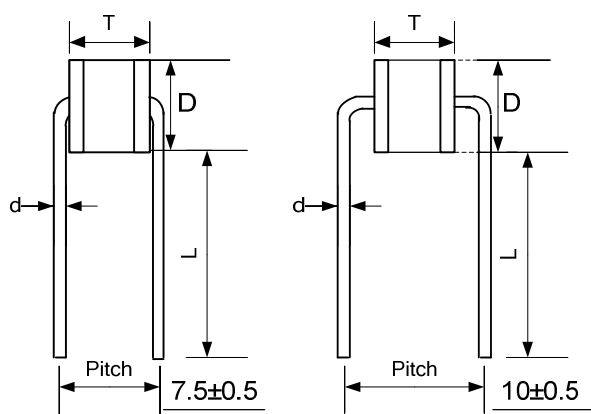
□ = M (No Lead Type)



(Unit: mm)

Item	Dimensions	
	Spec.	Tolerance
D	5.5	+0.3/-0.5
T	6.0	+0.3/-0.5

□ = C, E (Formed Lead)



(Unit: mm)

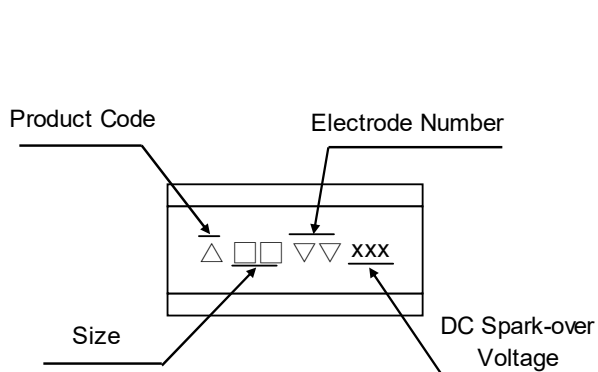
Item	Dimensions	
	Spec.	Tolerance
D	5.5	+0.3/-0.5
T	6.0	+0.3/-0.5
d	0.8	± 0.05
L	15.0	Min
P	7.5	± 0.5
	10	± 0.5

Gas Discharge Tube: GD52R Series

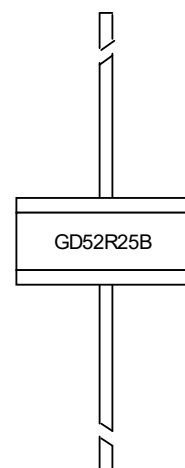
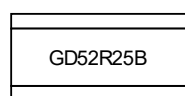


2-Electrode $\Phi 5.5$ x T6 mm Type

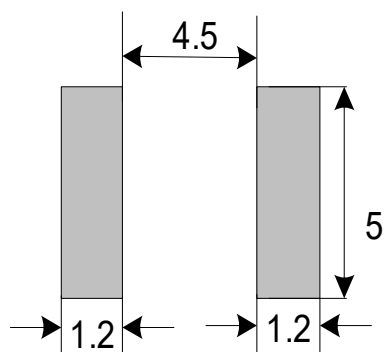
■ Marking



Example



■ Recommended Pad Size



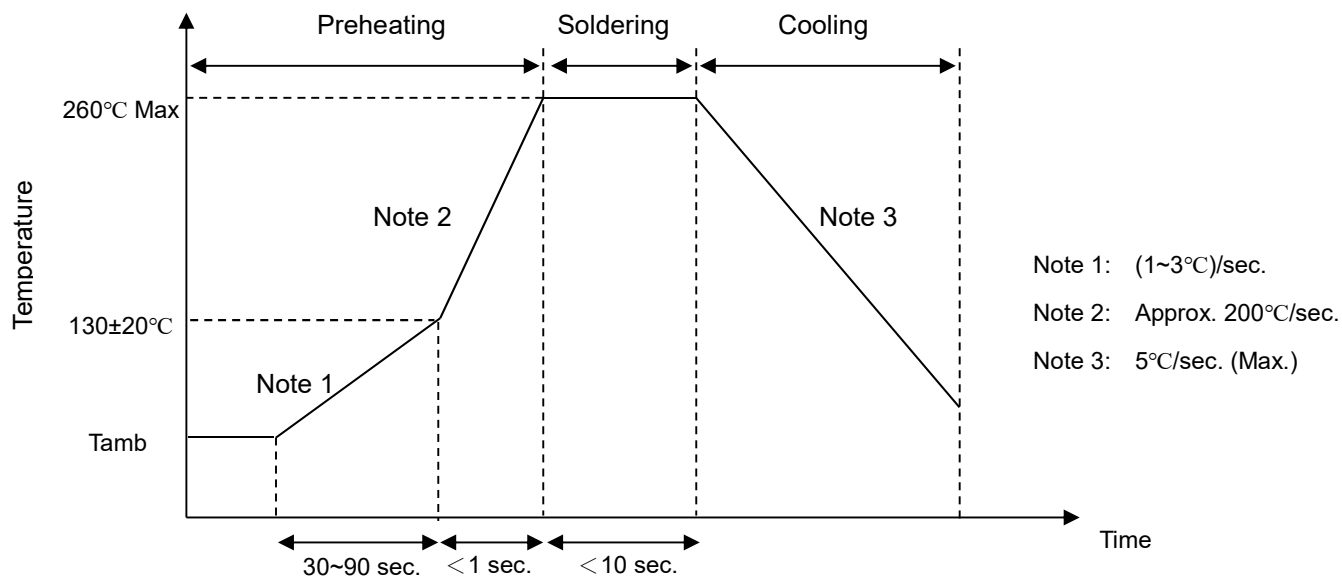
Gas Discharge Tube: GD52R Series



2-Electrode $\Phi 5.5 \times T6$ mm Type

■ Soldering Recommendation

● Wave Soldering Profile



● Recommended Reworking Conditions with Soldering Iron

Item	Condition
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec. (max.)
Distance from Tube	2 mm (min.)

Gas Discharge Tube: GD52R Series



2-Electrode $\Phi 5.5$ x T6 mm Type

■ Packaging

● Bulk

◆ For No Lead (M Type) :

Quantity: 200pcs per PVC Box, 1200pcs per Inner Box

Quantity (MPQ): 1200pcs

◆ For Axial Lead (Y Type):

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

Quantity (MPQ): 500pcs

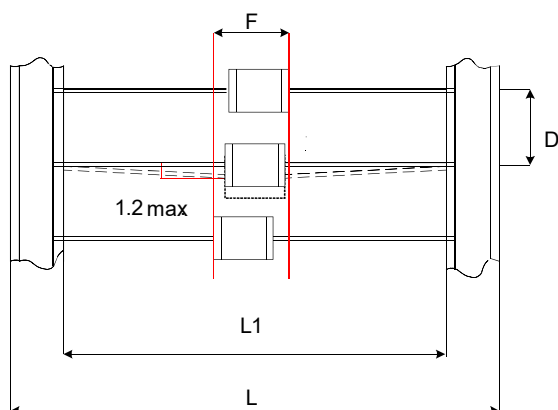
◆ For Formed Lead (C, E Type) :

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

Quantity (MPQ): 500pcs

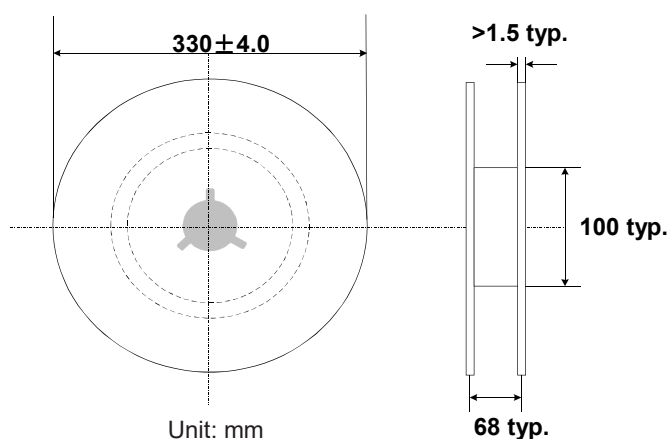
● Taping

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



Unit: mm

Item	Dimension	
	Spec.	Tolerance
L1	52	± 2
L	64	± 3
D	10	± 0.5
F	$T \pm 1.4$	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