

Gas Discharge Tubes



GDT introduction: Gas discharge tubes (GDT) use noble gases enclosed in ceramic tubes to provide an alternate circuit path for voltage spikes. The ceramic envelope and nickel connectors allow for high loads and surges that function at 20KA, 40KA, 50KA, 60KA, 100KA & 150KA. The breakdown voltages of the devices have a wide range with up to 20% tolerance. Major applications are high frequency telecommunication lines, stations, security systems, HID and high quality Surge Protection Devices (SPD).

Features

- | | |
|--------------------------------------|--|
| 1. RoHS & HF compliant | 5. Low capacitance |
| 2. Rugged ceramic-metal construction | 6. Agency recognition :UL/cUL |
| 3. Available with or without leads | 7. Operating temperature : -30°C ~ +85°C |
| 4. DC spark-over voltage: 70~3600V | Storage temperature: -40°C ~ +115°C |

Recommended Applications

- | | |
|----------------|-------------------------|
| 1. Cable Modem | 5. Power supplier |
| 2. xDSL | 6. Consumer electronics |
| 3. Set-Top Box | |
| 4. TV sets | |

Part Number Code**EC**

Series:
EC: $\phi 8 \times 6$

80 - 230X

Lead Type:
None = Thrust
80 = SMD

DC Line Voltage:
90X = 90V
230X = 230V
102X = 1000V

Gas Discharge Tubes

Electrical Characteristics

Part No.		DC Spark-over Voltage	Maximum Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20 μ s)		Impulse Life (10/1000 μ s)	Normal Alternating Discharge Current		DC Holdover Voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)
		100V/S	100V/ μ S	1KV/ μ s	1 times	10 times	100 A	50Hz 1Sec	Single 9 Cycles	<150ms		
DIP	SMD	(V)	(V)	(V)	(KA)		Times	(A)		(V)	(G Ω)	(pF)
EC75X	EC80-75X	75 $\pm$ 20%	500	600	20	10	300	20	65	52	1	1
EC90X	EC80-90X	90 $\pm$ 20%	500	600	20	10	300	20	65	52	1	1
EC150X	EC80-150X	150 $\pm$ 20%	500	700	20	10	300	20	65	52	1	1
EC230X	EC80-230X	230 $\pm$ 20%	500	700	20	10	300	20	65	80	1	1
EC250X	EC80-250X	250 $\pm$ 20%	500	700	20	10	300	20	65	135	1	1
EC300X	EC80-300X	300 $\pm$ 20%	700	900	20	10	300	20	65	150	1	1
EC350X	EC80-350X	350 $\pm$ 20%	700	900	20	10	300	20	65	150	1	1
EC400X	EC80-400X	400 $\pm$ 20%	800	1000	20	10	300	20	65	150	1	1
EC470X	EC80-470X	470 $\pm$ 20%	900	1100	20	10	300	20	65	150	1	1
EC500X	EC80-500X	500 $\pm$ 20%	1000	1200	20	10	300	20	65	150	1	1
EC600X	EC80-600X	600 $\pm$ 20%	1100	1300	20	10	300	20	65	150	1	1
EC800X	EC80-800X	800 $\pm$ 20%	1500	1700	20	10	300	20	65	150	1	1
EC102X	EC80-102X	1000 $\pm$ 20%	1600	1800	15	10	300	10	65	150	1	1
EC122X	EC80-122X	1200 $\pm$ 20%	1800	2000	15	10	300	10	65	150	1	1
EC152X	EC80-152X	1500 $\pm$ 20%	2200	2400	10	5	300	10	65	150	1	1
EC162X	EC80-162X	1600 $\pm$ 20%	2400	2600	10	5	300	10	65	150	1	1
EC202X	EC80-202X	2000 $\pm$ 20%	2800	3000	10	5	300	10	65	150	1	1
EC252X	EC80-252X	2500 $\pm$ 20%	3300	3500	10	5	300	10	65	150	1	1
EC272X	EC80-272X	2700 $\pm$ 20%	3500	3700	10	5	300	10	65	150	1	1
EC302X	EC80-302X	3000 $\pm$ 20%	3800	4000	10	5	300	10	65	150	1	1
EC352X	EC80-352X	3500 $\pm$ 20%	4300	4500	10	5	300	10	65	150	1	1
EC362X	EC80-362X	3600 $\pm$ 20%	4400	4600	10	5	300	10	65	150	1	1
EC402X	EC80-402X	4000 $\pm$ 20%	4000	6000	5	3	300	5	65	150	1	1
EC452X	EC80-452X	4500 $\pm$ 20%	4500	6500	5	3	300	5	65	150	1	1
EC502X	EC80-502X	5000 $\pm$ 20%	6000	6500	5	3	300	5	65	150	1	1

DC Spark-over Voltage

DC Measuring Voltage

70-90V

50V

120-800V

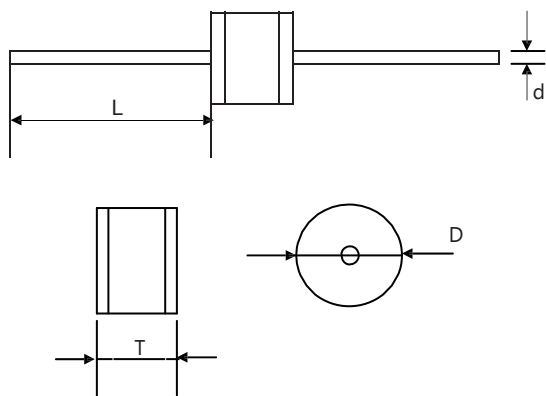
100V

1000-5000V

250V

Dimension
EC (Axial lead type)

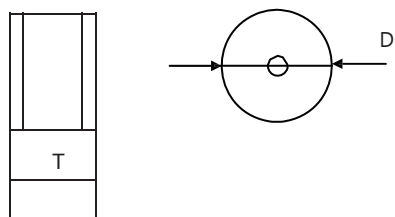
Unit:mm



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

EC80 (No lead type)

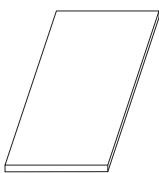
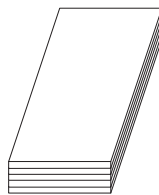
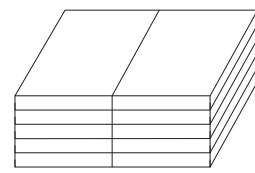
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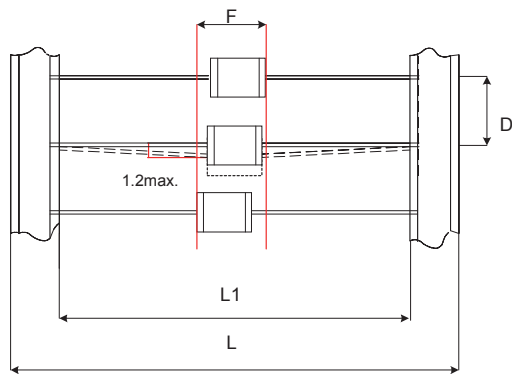
Item	Dimensions	
	Spec.	Tolerance
D	8.0	+0.3/-0.5
T	6.0	+0.3/-0.5

Packaging Taping

Unit:mm

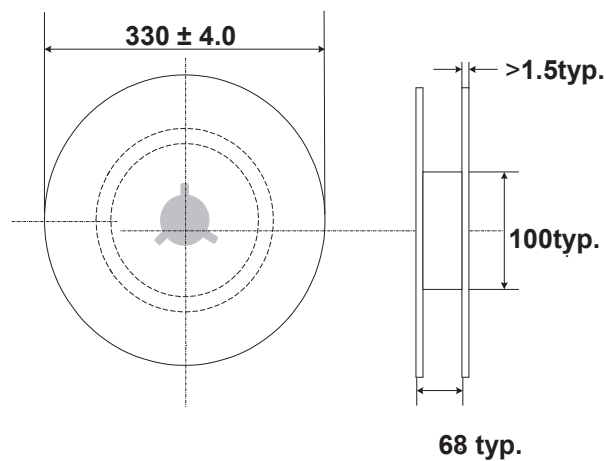
Plastic Tray (252×135×10mm)	Inner Box (270×145×50mm)	Outside Box (310×280×275mm)
		
100 PCS/ Plastic Tray	500 PCS/ Box	5,000 PCS/ Carton

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



Unit:mm

Item	Dimensions	
	Spec.	Tolerance
L1	52	±2
L	64	±3
D	10	±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