

# CG9 Series

## Gas Discharge Tubes



### Description

Littelfuse CG9 two electrode high voltage (1.0–5.5 kV) devices are designed for surge protection and high isolation applications, and for applications for which bias voltages or signal levels of several hundred volts are normally present.

### Features

- Rugged Ceramic-metal construction
- Voltage Range 1000–5500 V
- 10 kA 8/20  $\mu$ s surge capability
- Low capacitance (<1.0 pF)
- Available in T&R packaging
- Available with leads
- RoHS compliant and Lead-free

### Web Resources



Download ECAD models, order samples, and find technical resources at [www.littelfuse.com](http://www.littelfuse.com)

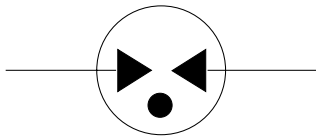
### Agency Approvals

Agency	Agency File Number
	E320116

### Applications

- Antenna circuit
- Power supplies
- CATV equipment
- Air conditioning
- Test equipment
- Set-top box
- Renewable energy

### Two Electrode GDT Graphical Symbol



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### Electrical Characteristics

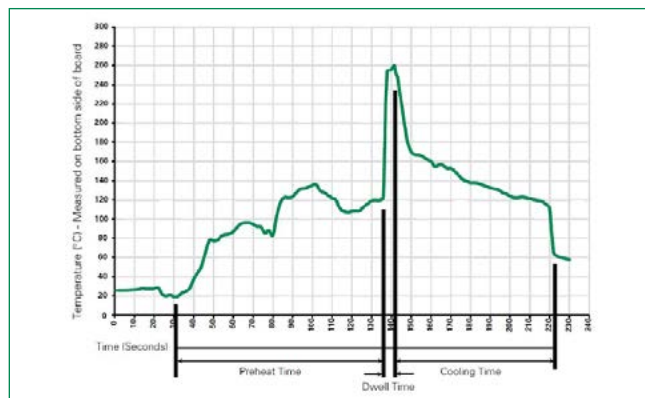
Part Number	Device Specifications (at 25 °C)					Service Life			
	DC Breakdown in Volts (@100 V/s)	Impulse Breakdown in Volts (@100 V/μs)	Impulse Breakdown in Volts (@1 kV/μs)	Insulation Resistance	Capacitance (@1 MHz)	10 Operations 50 hZ, 1s	1 Operation 50 hZ, 0.18 s, 9 Cycles	10 Operations @ 8/20 μs	1 Operation @ 8/20 μs
CG91.0	850~1150	1300	1400	>10 GΩ	<1 pF	10 A	65 A	10 kA	15 kA
CG91.2	960~1440	1900	2000	>10 GΩ	<1 pF	10 A	65 A	10 kA	15 kA
CG91.5	1200~1800	2200	2300	>10 GΩ	<1 pF	10 A	65 A	10 kA	15 kA
CG91.8	1440~2160	2600	2700	>10 GΩ	<1 pF	10 A	65 A	10 kA	15 kA
CG92.0	1600~2400	3500	3800	>10 GΩ	<1 pF	10 A	65 A	10 kA	15 kA
CG92.5	2000~3000	3900	4000	>10 GΩ	<1 pF	10 A	20 A	10 kA	15 kA
CG93.5	2800~4200	4900	5000	>10 GΩ	<1 pF	10 A	20 A	10 kA	15 kA
CG94.5	3600~5400	5800	6000	>10 GΩ	<1 pF	10 A	20 A	10 kA	15 kA
CG95.5	4675~6325	6500	7000	>10 GΩ	<1 pF	5 A	10 A	10 kA	15 kA

**Note:** CG91.5LTR&CG91.8LTR don't have UL agency approval.

### Product Characteristics

Item	Test Condition
<b>Operating &amp; Storage Temperature</b>	-40 °C to 125 °C
<b>Product Marking</b>	LF Logo, Voltage and date code; Black ink positive print
<b>Material</b>	Device & Wire: Tin plated 17.5±12.5 Microns

### Soldering Parameters: Wave Soldering (Thru-Hole Devices)



Wave Parameter	Lead-Free Recommendation
<b>Preheat:</b> (Depends on Flex Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum	100 °C
Temperature Maximum	150 °C
Preheat Time	60–180 seconds
<b>Solder Pot Temperature</b>	260 °C Maximum
<b>Solder Dwell Time</b>	2–5 seconds

**Recommended Hand-Solder Parameters:**

Solder Iron Temperature: 350 °C +/- 5 °C

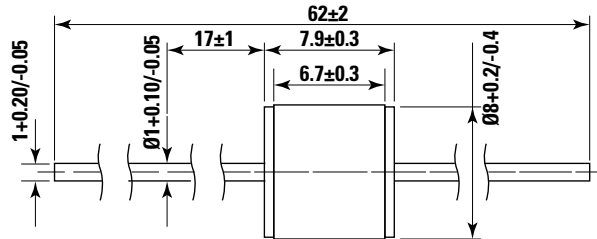
Heating Time: 5 seconds max.

**Note:** These devices are not recommended for IR or Convection Reflow process.

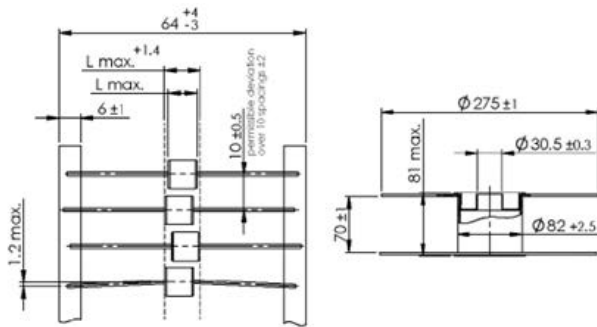
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## Gas Discharge Tubes

### Device Dimensions



### Packaging Dimensions



### Part Numbering System and Ordering Information

	CG9	X.X	XXX
Series			
Breakdown Voltage			
	1.0	=	1000 V
	1.2	=	1200 V
	1.5	=	1500 V
	1.8	=	1800 V
	2.0	=	2000 V
	2.5	=	2500 V
	3.5	=	3500 V
	4.5	=	4500 V
	5.5	=	5500 V
Lead/Packaging Option Code			
	L	=	Leaded/Bulk pack, 100 pcs per tray
	L TR	=	Leaded/Tape & Reel, 500 pcs per reel

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