

GL-7703 IGNITRON

**CAPACITOR-DISCHARGE SERVICE
 DC SHORT-CIRCUITING-SWITCH SERVICE**

**20,000 VOLTS PEAK
 100,000 AMPERES PEAK**

The GL-7703 is a sealed, stainless-steel-jacketed ignitron for use as a switch in capacitor-discharge circuits operating up to 20,000 volts. In this service the tube will carry peak currents up to 100,000 amperes. The anode seal is enclosed in an insulating compound to prevent external voltage flashover.

Electrical

Cathode Excitation—Cyclic	
Cathode Spot Starting—Ignitor	
Number of Electrodes	
Main Anodes	1
Main Cathodes	1
Ignitors	1

Mechanical

Envelope—Stainless Steel	
Mounting Position—Axis Vertical, Anode Terminal Up	
Net Weight	2 Pounds

Thermal

Type of Cooling—Air or Liquid, by clamp around lower portion of tube	
Clamp Temperature	10 to 30 C
Cathode Temperature, maximum	35 C
Anode Insulating-Compound Temperature*, maximum	70 C

Capacitor-Discharge Service, Intermittent Pulse Duty, Sinusoidal Current†

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DC Short-Circuiting-Switch Service

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Ignitor Ratings

	Minimum	Maximum		Minimum	Maximum
Separate Excitation			Anode Firing		
Ignitor Voltage			Ignitor Voltage		
Forward Open Circuit	1500	3000	Volts	Forward, maximum	— 3000
Inverse, maximum	—	5	Volts	Inverse, maximum	— 5
Ignitor Short-Circuit Current	200	250	Amperes	Peak Ignitor Current	200 250
Length of Firing Pulse, sine wave	5	10	Microseconds		Amperes

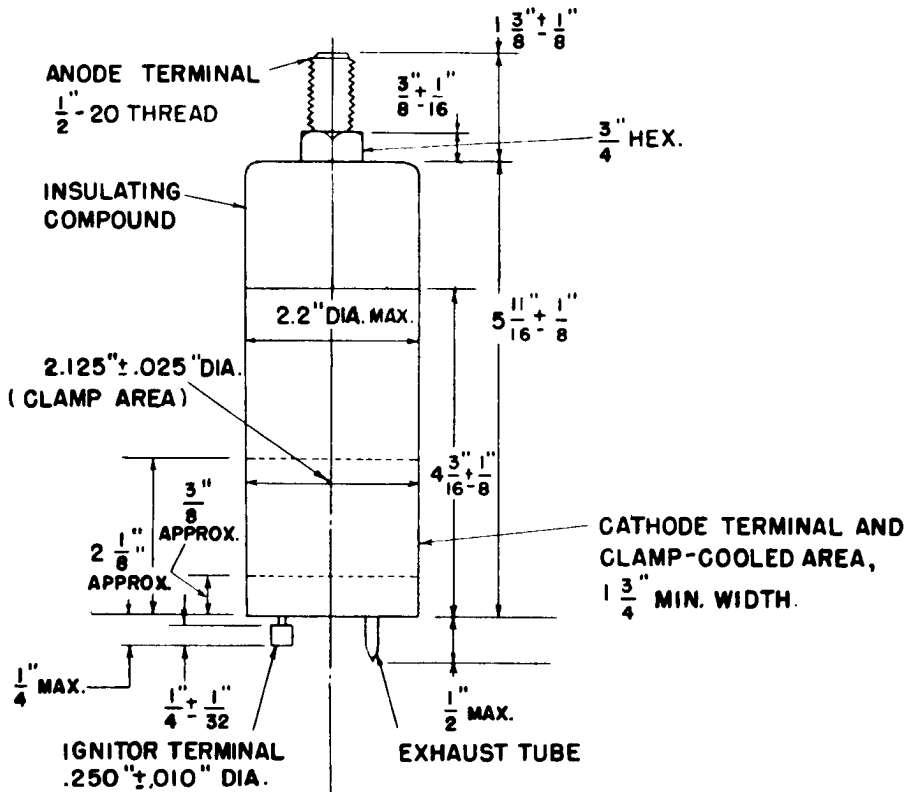
* Anode-seal, insulating-compound temperature must always be higher than the cathode temperature to prevent mercury condensation on the anode and anode seal. Before tube operation, the anode seals must be heated long enough to vaporize all mercury from the seal area.

† The tube may become a closed switch (does not open) carrying current in both directions until the current dampens out.

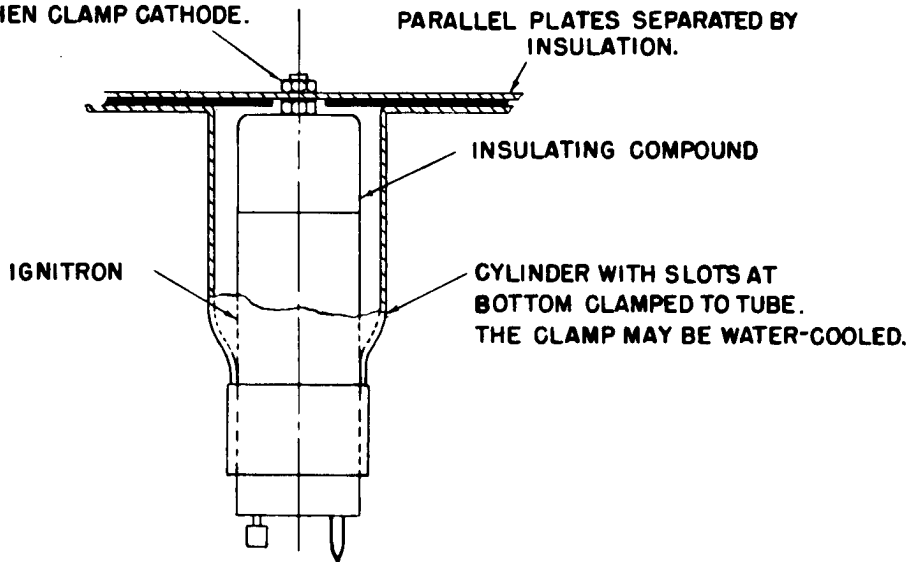
‡ The tube cannot hold off this voltage immediately after conduction. A 1-to-10-second delay may be required before reapplication of voltage.

¶ Dampened oscillations are permissible provided the oscillating cycles do not exceed 20. The peak current value for one-half cycle must not be exceeded.

§ Rate of rise depends on circuit.



TIGHTEN ANODE CONNECTION WITHOUT STRESS ON SEAL, THEN CLAMP CATHODE.



SUGGESTED METHOD FOR PROVIDING MOUNTING FOR COAXIAL CONNECTION

TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky