

—Standard Valves—

4049-C
Valve

4049-C VALVE

HALF WAVE, HOT CATHODE MERCURY VAPOUR RECTIFIER.

SPECIFICATION.

Cathode.

Oxide coated filament (shielded).
Constant voltage type.

Base.

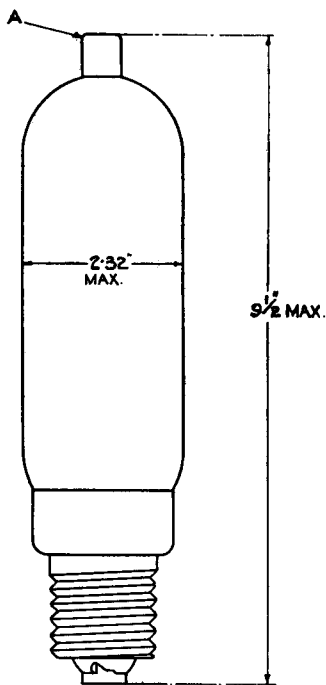
Edison screw Goliath.

Dimensions.

Maximum overall length $9\frac{1}{2}"$ (24.1 cms.)
Maximum diameter $2.32"$ (5.9 cms.)
Anode cap Type D.
Net weight 0.33 lbs. (150 gms.)

Constants.

Filament voltage 4 volts
Nominal filament current 9.5 amps.
Maximum peak anode current 5 amps.
Maximum peak inverse voltage 10,000 volts
Max. average anode current 1.25 amps.
Ambient temperature range 5°C. min.
70°C. max.
Condensed mercury temperature range 20°C. min.
70°C. max.



Recommended Temperature Conditions.

	Peak Inverse Voltage.	
	Less than 5,000 volts.	5,000—10,000 volts.
Natural ventilation	15°C.—55°C.	15°C.—45°C.
Forced ventilation	15°C.—70°C.	15°C.—60°C.

Cathode Heating Time.

Ambient temperature 5°C.—10°C. 10°C.—15°C. Greater than 15°C.
Heating period 10 5 1* mins.

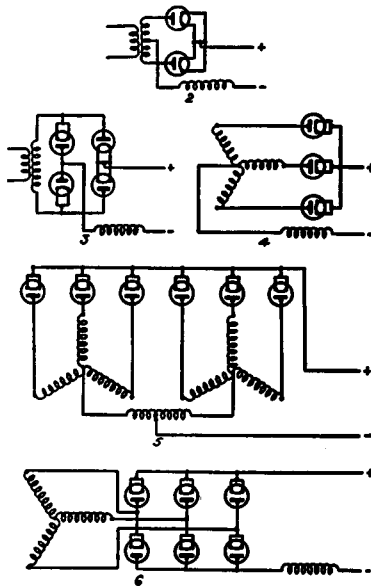
* This time may be reduced to 30 seconds if absolutely essential.

Note:—After shipment the filament must be run at full voltage for 30 minutes, before any anode voltage is applied, so that the mercury shall be distributed correctly.

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TYPICAL OPERATING CONDITIONS.

Circuit	Number of Valves	Approx. D.C. Output Volts	Maximum D.C. Load Current
2	2	3,200 volts	2.5 amps.
3	4	6,400 volts	2.5 amps.
4	3	4,550 volts	3.75 amps.
5	6	4,550 volts	7.5 amps.
6	6	9,100 volts	3.75 amps.



Important.

This rectifier being directly heated, the output circuit must be connected to the mid-point of the filament transformer. The filament transformer should be so connected that the anode and filament voltages are 90° out of phase. The maximum peak anode current and output current should be reduced by 50 per cent., if quadrature operation of the filament and anode voltages is not possible.

Temperature limits given under "Natural Ventilation" are only valid for unrestricted natural ventilation which causes the condensed mercury temperature to be about 15°C.—20°C. above the ambient temperature, forced air blast being required for operation up to the maximum condensed mercury temperature limit.

For further information on H.C.M.V. rectifiers, see sheet G.I.