



# Hot Cathode Mercury Vapour Rectifier

## 4080A

2V/590E  
(4080A)

### CATHODE.

Oxide-coated shielded filament

Voltage	5	V
Nominal current	100	A

### DIMENSIONS.

Maximum overall length	685	mm.
Maximum bulb diameter	266	mm.
Net weight	4	kg.
Base. Special 3 pin.	See Drawing.	
Top Cap. Special.	See Drawing.	

### MAXIMUM RATINGS.

Maximum peak inverse voltage	16,000	V
Maximum peak anode current	50	A
Maximum average anode current	20	A
Condensed mercury temperature range with forced air cooling	15° C. to 60° C.	maximum

The above ratings apply to operation with choke input filter and a supply frequency of 50 c/s.

### MAXIMUM PEAK INVERSE VOLTAGE RATINGS.

Natural Ventilation	{ 15° C. to 45° C.	{ 15° C. to 35° C.	—	—
Forced Ventilation	{ 15° C. to 60° C.	{ 15° C. to 50° C.	{ 15° C. to 40° C.	{ 15° C. to 35° C.
Peak inverse voltage	Less than 7,500 V	7,500 V to 10,000 V	10,000 V to 12,500 V	Greater than 12,500 V

2V/590E  
(4080A)

# Hot Cathode Mercury Vapour Rectifier

4080A



## TYPICAL OPERATING CONDITIONS (for ideal choke-input filter).

Circuit No.	No. of Valves	Maximum D.C. Output Volts	Maximum D.C. Output Current
2	2	5,000 V	31 A
3	4	10,000 V	31 A
4	3	7,500 V	38 A
5	6	7,500 V	76 A
6	6	15,000 V	47 A

This rectifier being directly heated, the output circuit must be connected to the mid-point of the filament transformer secondary.

## CATHODE HEATING TIME.

Ambient Temperature	15° to 20° C.	20° C. and above
Min. pre-heating period	30 min.	10 min.

After shipment or transit the valve must be pre-heated not less than 30 minutes before any anode voltage is applied so that the mercury may be distributed correctly.

Temperature limits given under "Natural Ventilation" are only valid for unrestricted natural ventilation, forced air blast being required for operation up to the maximum condensed mercury temperature limit.

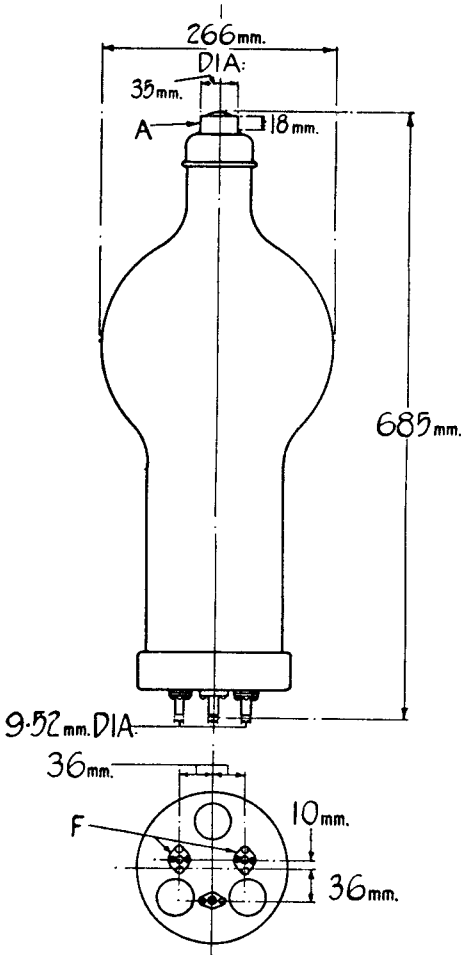
**NOTE.**—Before putting a valve of this type into service it is recommended that reference be made to the General Information Sheet K.



# Hot Cathode Mercury Vapour Rectifier

4080A

2V/590E  
(4080A)



2V/590E  
(4080A)

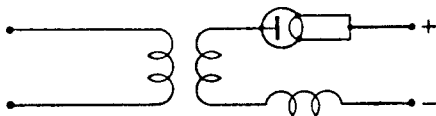
# Hot Cathode Mercury Vapour Rectifier



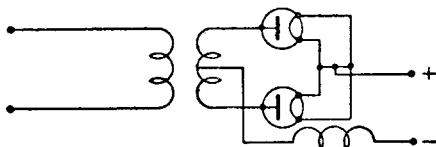
4080A

Circuit  
No.

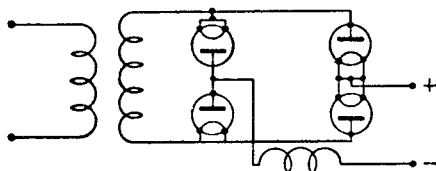
1



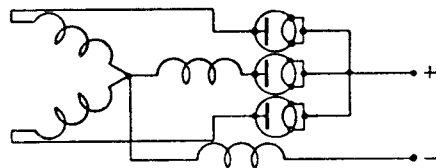
2



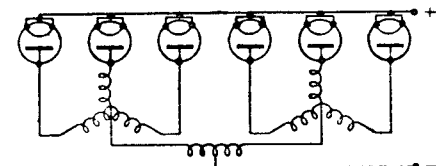
3



4



5



6

