

DIAMETER 3½" NOMINAL

**90EG4F****90EG4F****Oscilloscope Tube****FLAT FACED BULB**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

**DATA****GENERAL :**

|                                                           |                 |                     |
|-----------------------------------------------------------|-----------------|---------------------|
| Heater: Voltage                                           | 4.0             | a.c. or d.c. volts. |
| Current                                                   | 1.0             | amp.                |
| Direct Inter-electrode Capacitances.                      |                 |                     |
| Modulator to all other electrodes                         | 25 $\mu$ f.     |                     |
| Each X Plate to all other electrodes                      | 25 $\mu$ f.     |                     |
| Each Y Plate to all other electrodes                      | 25 $\mu$ f.     |                     |
| One X to one Y Deflector Plate                            | 6 $\mu$ f.      |                     |
| Cathode to all other electrodes                           | 15 $\mu$ f.     |                     |
| Screen :                                                  |                 |                     |
| Fluorescence                                              | Green.          |                     |
| Persistence                                               | Short.          |                     |
| (10m sec. min./100m sec. max. for 1% initial brightness). |                 |                     |
| Focusing Method                                           | Electrostatic.  |                     |
| Deflecting Method                                         | Electrostatic.  |                     |
| Overall Length                                            | 332 $\pm$ 8 mm. |                     |
| Greatest Diameter of Bulb                                 | 88.5 mm.        |                     |
| Minimum Useful Screen Diameter                            | 75 mm.          |                     |
| Mounting Position                                         | Any.            |                     |
| Base                                                      | B.12.D.         |                     |

Pin 1—Modulator.

Pin 2—Cathode.

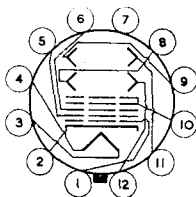
Pin 3—Heater.

Pin 4—Heater.

Pin 5—Anode 1.

Pin 6—Anode 2.

Pin 7—No connection.



Pin 8—Y2.

Pin 9—X2.

Pin 10—Anode 3 and  
Internal Conductive  
coating.

Pin 11—X1.

Pin 12—Y1.

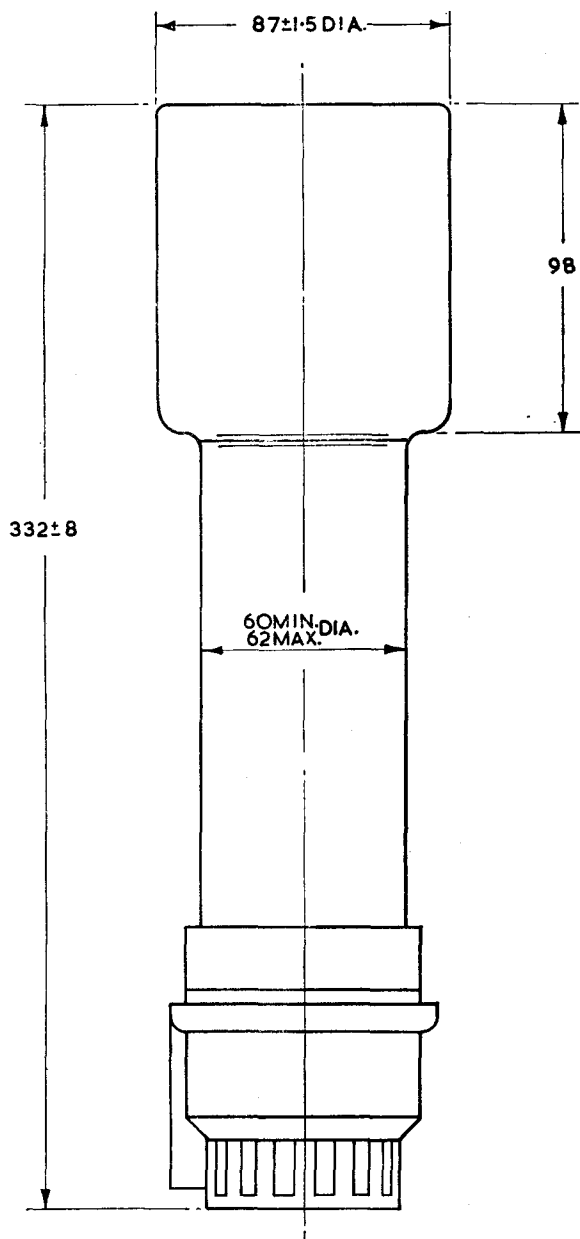
**Typical Operating Conditions :**

|                             |                   |                   |
|-----------------------------|-------------------|-------------------|
| Anode 1                     | 2000 volts.       | 2000 volts.       |
| Anode 2                     | 700 volts.        | 350 volts.        |
| Anode 3 (5000v. max.)       | 4000 volts.       | 2000 volts.       |
| Modulator volts for cut-off | -40 to -80 volts. | -40 to -80 volts. |

|                                 |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Deflection Sensitivity :</b> | <b>mm/volt.</b> | <b>mm/volt.</b> |
| X Plate                         | 0.085           | 0.170           |
| Y Plate                         | 0.190           | 0.380           |

**Note 2.** The angle between the trace produced by X1 and X2 and the trace produced by Y1 and Y2 is  $90^\circ \pm 3^\circ$ .

**Note 3.** The undeflected focused spot will fall within a circle having a 6 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

**Note 1.** When viewing the screen with the tube positioned such that the base spigot is uppermost, a positive voltage applied to the terminal X1 will deflect the spot to the left and a positive voltage applied to the terminal Y1 will deflect the spot upwards.