

**90EY4****90EY4****Oscilloscope Tube**

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                                          | . . . . .     | Yellow.                       |
| Afterglow                                             | . . . . .     | Yellow.                       |
| Persistence of Afterglow                              | . . . . .     | Long.                         |
| (1 sec. min./10 sec. max. for 1% initial brightness). |               |                               |
| Focusing Method                                       | . . . . .     | Electrostatic.                |
| Deflecting Method                                     | . . . . .     | Electrostatic.                |
| Overall Length                                        | . . . . .     | 332 $\pm$ 8 mm.               |
| Greatest Diameter of Bulb                             | . . . . .     | 90 mm.                        |
| Minimum Useful Screen Diameter                        | . . . . .     | 70 mm.                        |
| Mounting Position                                     | . . . . .     | Any.                          |
| Base                                                  | . . . . .     | B.12.D.                       |

Pin 1—Modulator.

Pin 2—Cathode.

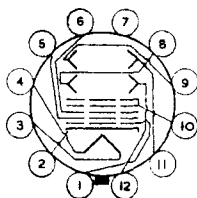
Pin 3—Heater.

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.

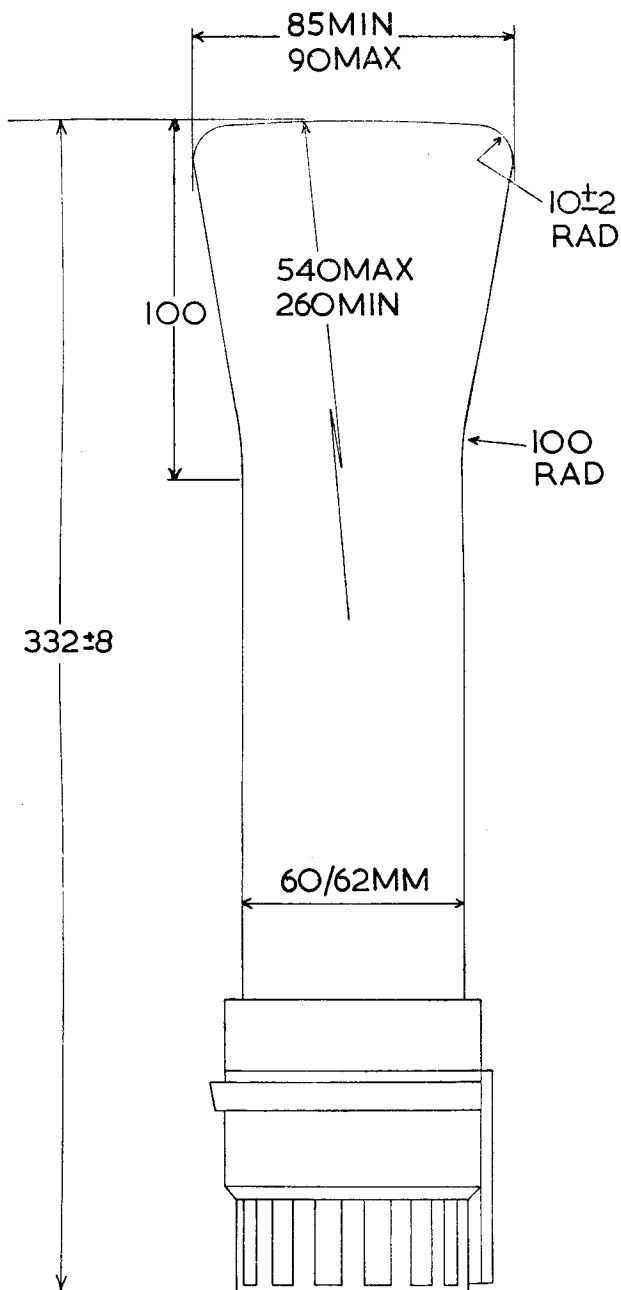
**Typical Operating Conditions :**

|                             |                       |                   |
|-----------------------------|-----------------------|-------------------|
| 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> | mm/volt.        | mm/volt. |
| 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.