**90E04 Oscilloscope Tube**

**Electrostatic Focus. Electrostatic Deflection**

**General:**
- **Heater:** Voltage 4.0 a.c. or d.c. volts.
  - Current 1.0 amp.
- **Direct Inter-electrode Capacitances:**
  - Modulator to all other electrodes: 25μμf.
  - Each X Plate to all other electrodes: 25μμf.
  - Each Y Plate to all other electrodes: 25μμf.
  - One X to one Y Deflector Plate: 6μμf.
  - Cathode to all other electrodes: 15μμf.
- **Screen:**
  - Fluorescence: Orange.
  - Afterglow: Orange.
  - Persistence of Afterglow: Long.
  - (10 sec. min./100 sec. max. for 1% initial brightness).
- **Focusing Method:** Electrostatic.
- **Deflecting Method:** Electrostatic.
- **Overall Length:** 332 ± 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.
- **Anode 2:** 700 volts.
- **Anode 3 (5000v. max.):** 4000 volts.
- **Modulator volts for cut-off:**
  - -40 to -80 volts.
- **Deflection Sensitivity:**
  - X Plate: 0.085 mm/volt.
  - Y Plate: 0.190 mm/volt.

**Note 2:** The angle between the trace produced by X1 and X2 and the trace produced by Y1 and Y2 is 90° ± 3°.

**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.