

DIAMETER 10" NOMINAL

10MW4A

Television Monitor Tube

MAGNETIC FOCUS. MAGNETIC DEFLECTION

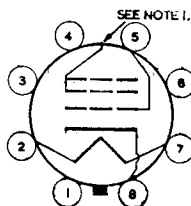
10MW4A

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	9 μ f.	
Cathode to all other electrodes	9 μ f.	
Screen :	Aluminium Backed.	
Fluorescence	White.	
Persistence	Short (5m sec./25m sec. for 1% initial brightness)	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	483 $\pm$ 10 mm.	
Greatest Diameter of Bulb	257 mm.	
Minimum Useful Screen Diameter	230 mm.	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8.	
Base	International Octal.	

- Pin 1—No connection.
Pin 2—Heater.
Pin 3—Pin omitted.
Pin 4—Pin omitted.



- Pin 5—Modulator.
Pin 6—Pin omitted.
Pin 7—Heater.
Pin 8—Cathode.
Cap—Anode.

Maximum Ratings :

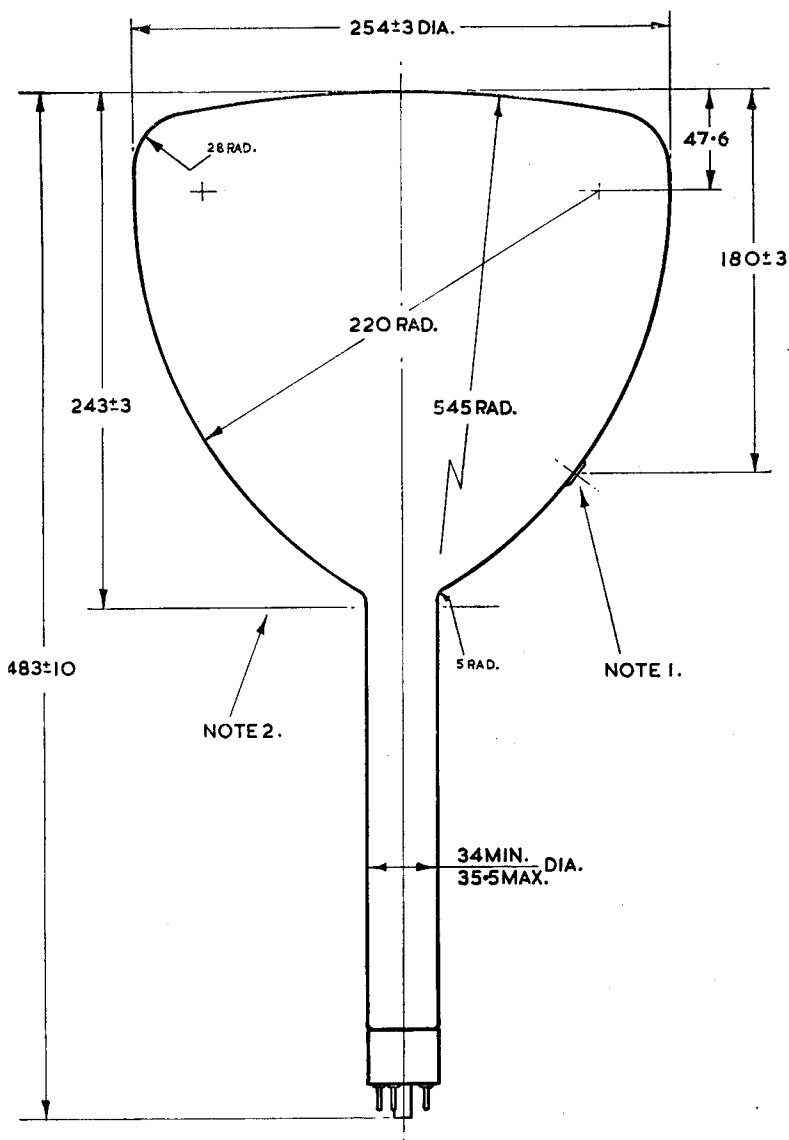
Final Anode Voltage	11000 volts.
Modulator Voltage :	
Negative bias value	130 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	150 volts.
Heater positive with respect to cathode	150 volts.

Typical Operating Conditions :

Anode Voltage	10000 volts.
Modulator Voltage for cut-off	-70 to -120 volts.
Focusing-Coil Current—See Note 3	550 A.T.
Spot Position	See Note 4

Note 3. Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 10 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap. by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where a gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

DIAMETER 12" NOMINAL

I2EG6**I2EG6**

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	.	.	.	.	15 μ f.
Each X Plate to all other electrodes	.	.	.	.	15 μ f.
Each Y Plate to all other electrodes	.	.	.	.	15 μ f.
One X to one Y Deflector Plate	.	.	.	.	4.0 μ f.
Cathode to all other electrodes	.	.	.	.	15 μ f.
Screen:					
Fluorescence	.	.	.	.	Green
Persistence of Afterglow	.	.	.	.	Short
(10 m. sec min./100m. sec. max.) for 1% initial brightness.					
Focussing Method	.	.	.	.	Electrostatic
Deflecting Method	.	.	.	.	Electrostatic.
Overall Length	.	.	.	.	635 $\pm$ 5 mm.
Greatest Diameter of Bulb	.	.	.	.	312 mm.
Minimum Useful Screen Diameter	.	.	.	.	280 mm.
Mounting Position	.	.	.	.	Any
Base	.	.	.	.	B12D.

Pin 1—Modulator.

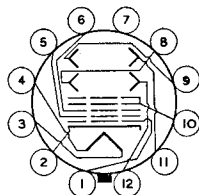
Pin 2—Cathode.

Pin 3—Heater.

Pin 4—Heater.

Pin 5—Anode 1

Pin 6—Anode 2



Pin 7— Internal Conductive Coating.

Pin 8—Y2.

Pin 9—X2.

Pin 10—Anode 3.

Pin 11—X1.

Pin 12—Y1.

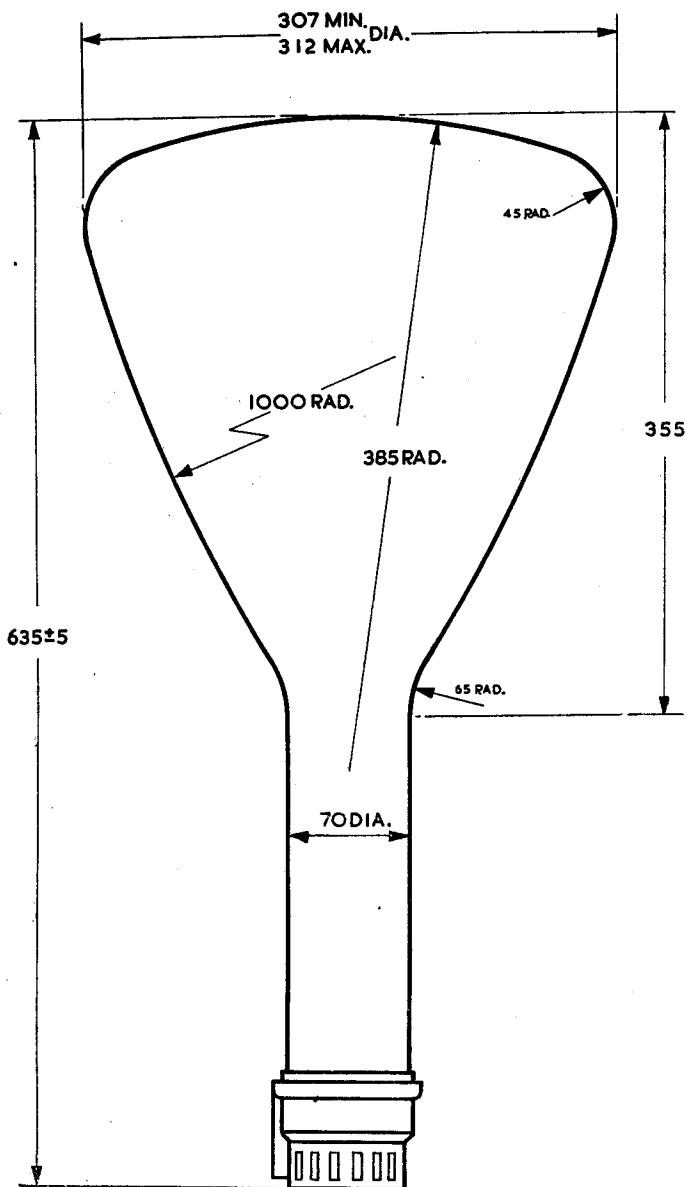
Typical Operating Conditions:

Anode 1	.	.	.	1000 volts.	1000 volts
Anode 2	.	.	.	550 volts.	900 volts.
Anode 3 (5500 volts max.)	.	.	.	3000 volts.	5000 volts.
Modulator volts for cut-off	.	.	.	-60 to -110	-60 to -110

Deflection Sensitivity:		mm./volt.	mm./volt.
X Plate	.	0.4	0.24
Y Plate	.	0.4	0.24

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 15 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.

12L03A

Radar Tube

ELECTROSTATIC FOCUS. MAGNETIC DEFLECTION

DATA

GENERAL:

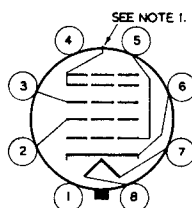
Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	15 μ f.	
Anode 1 to all other electrodes	15 μ f.	
Cathode to all other electrodes	12 μ f.	
Screen	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Electrostatic.	
Deflecting Method	Magnetic.	
Overall Length	535 $\pm$ 10 mm.	
Greatest Diameter of Bulb	306.5 mm.	
Minimum Useful Screen Diameter	265 mm.	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Anode 1.

Pin 3—Anode 2.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—Cathode.

Pin 7—Heater.

Pin 8—Heater.

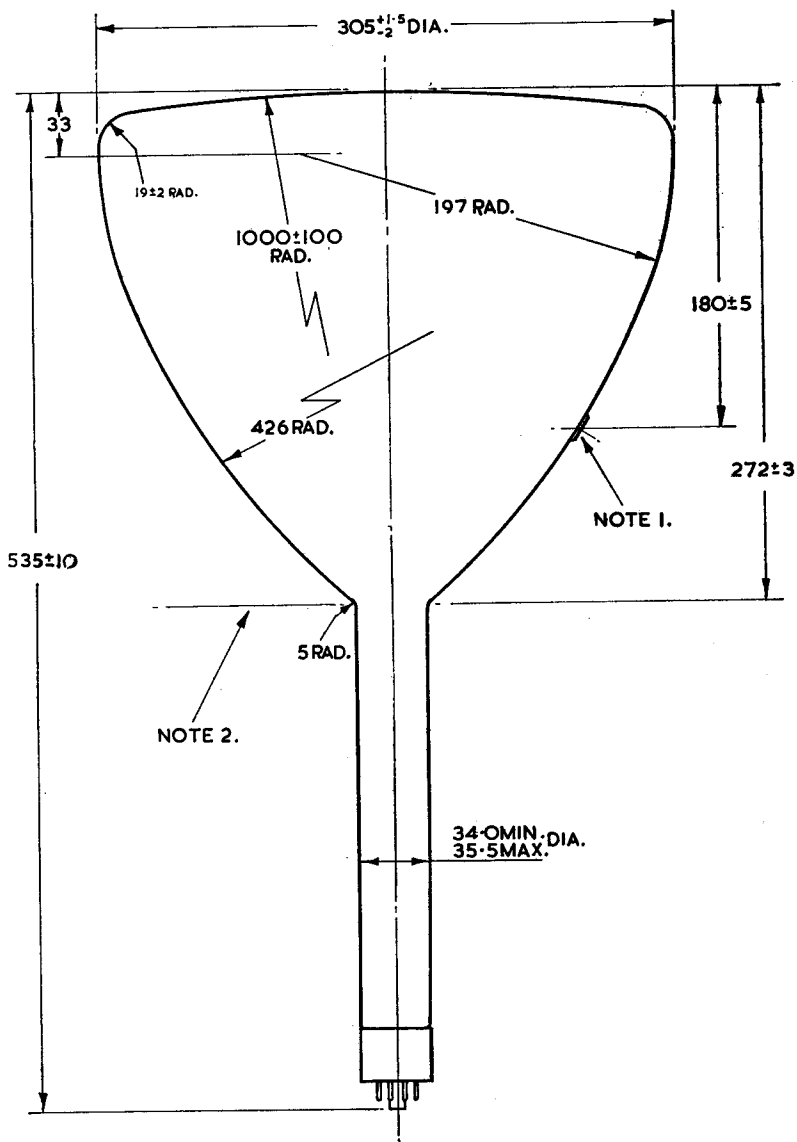
Cap—Final Anode.

Maximum Ratings:

Final Anode Voltage	13000 volts.
Anode 1 Voltage	2200 volts.
Modulator Voltage:	
Negative bias value	130 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages:	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions:

Final Anode Voltage	12000 volts.
Anode 2 Voltage	1900 volts. $\pm$ 100 volts.
Anode 1 Voltage—See Note 3	2000 volts.
Modulator Voltage for cut-off	-70 to -120 volts.
Spot Position	See Note 4



- Note 1.** The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.
- Note 2.** Reference line is determined by position where a gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.
- Note 3.** Anode 1 must always be at least 50 volts positive to Anode 2.
- Note 4.** The centre of the undeflected focused spot will fall within a circle having a 10 mm. radius concentric with the centre of the tube face.

DIAMETER 12" NOMINAL

I2M06A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

DATA**GENERAL :**

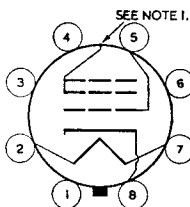
Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	12.0 μ f.	
Cathode to all other electrodes	10.0 μ f.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	510 $\pm$ 10 mm.	
Greatest Diameter of Bulb	306.5 mm.	
Minimum Useful Screen Diameter	265 mm.	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8.	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Pin omitted.

Pin 4—Pin omitted.



Pin 5—Modulator.

Pin 6—Pin omitted.

Pin 7—Heater.

Pin 8—Cathode.

Cap—Anode.

Maximum Ratings :

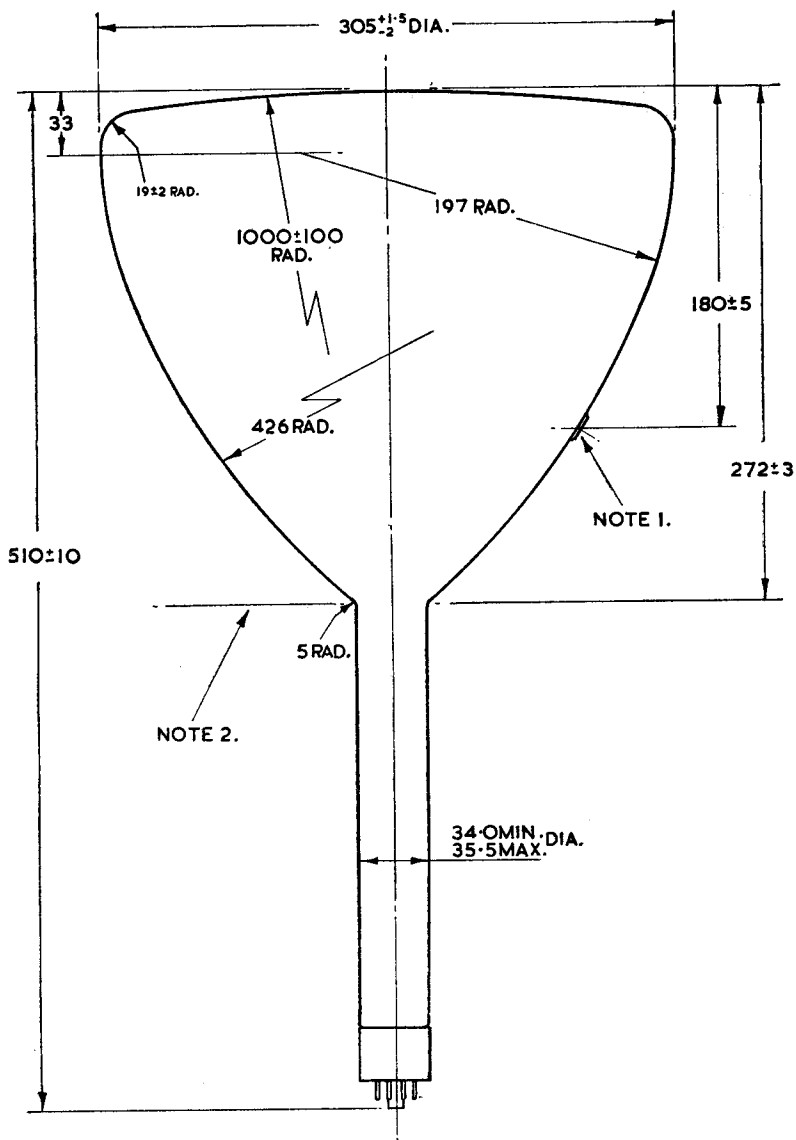
Anode Voltage	11000 volts.
Modulator Voltage :	
Negative bias value	130 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions :

Anode Voltage	10000 volts.
Modulator Voltage for cut-off	-75 to -115 volts.
Focusing-Coil Current—See Note 3	560 A.T.
Spot Position	See Note 4

Note 3. Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 10 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where a gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

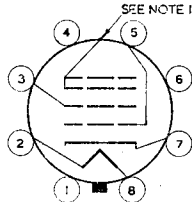
12T03A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

12T03A**DATA****GENERAL:**

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	9.0 μ mf.	
Anode 1 to all other electrodes	6.0 μ mf.	
Cathode to all other electrodes	8.0 μ mf.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	488 $\pm$ 7 mm.	
Greatest Diameter of Bulb	306.5 mm.	
Minimum Useful Screen Diameter	265 mm.	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8.	
Base	International Octal.	

- Pin 1—No connection.
 Pin 2—Heater.
 Pin 3—Anode 1.
 Pin 4—No connection.



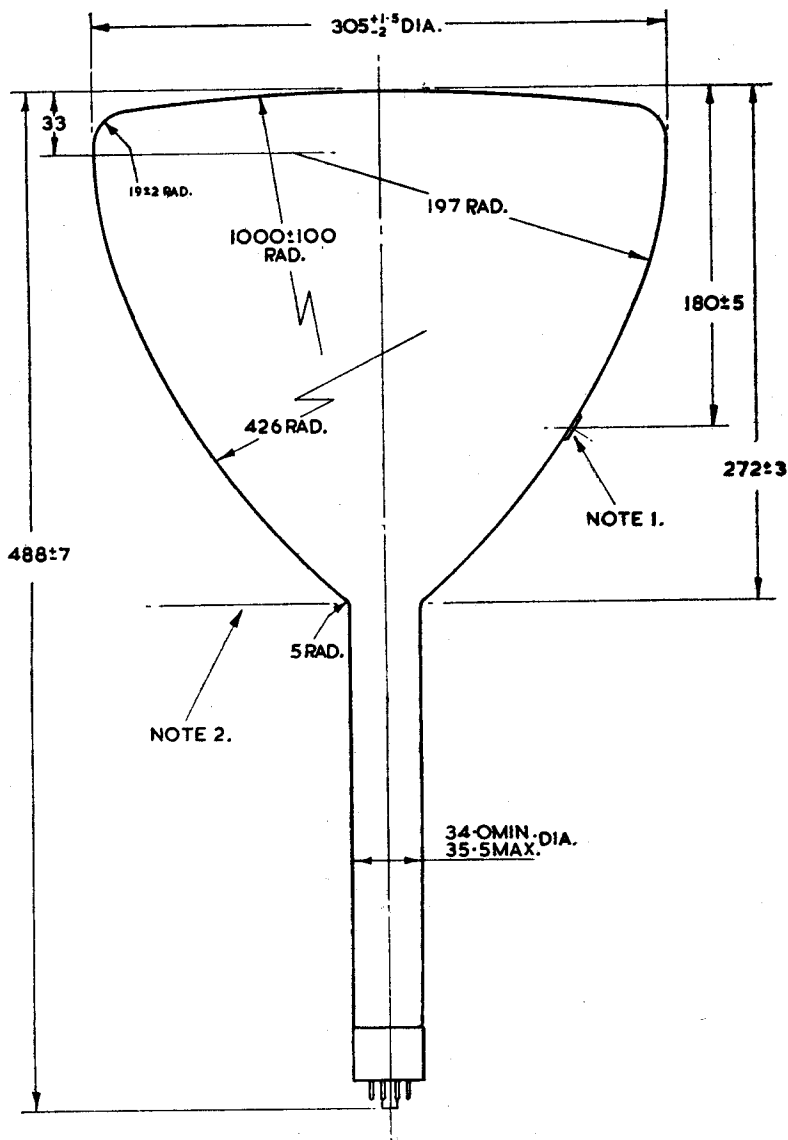
- Pin 5—Modulator.
 Pin 6—No connection.
 Pin 7—Cathode.
 Pin 8—Heater.
 Cap—Final Anode.

Maximum Ratings :

Final Anode Voltage	15000 volts.
Anode 1 Voltage	850 volts.
Modulator Voltage :	
Negative bias value	140 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	150 volts.
Heater positive with respect to cathode	150 volts.

Typical Operating Conditions :

Final Anode Voltage	10000 volts.
Anode 1 Voltage	700 volts.
Modulator Voltage for cut-off	-50 to -115 volts.
Focusing-Coil Current—See Note 3	700 A.T.
Spot Position	See Note 4



ALL SIZES IN MILLIMETRES.

- Note 1.** The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of the tube as Pin No. 5.
- Note 2.** Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.
- Note 3.** Focusing Coil positioned with centre line of air gap approximately 100 mm. from the reference line (see outline drawing).
- Note 4.** The centre of the undeflected focused spot will fall within a circle having 12 mm. radius concentric with the centre of the tube face.

DIAMETER 15" NOMINAL

15L03A**Radar Tube**

ELECTROSTATIC FOCUS. MAGNETIC DEFLECTION

15L03A**DATA****GENERAL :**

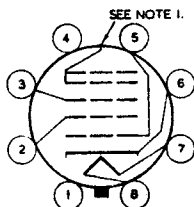
Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	15 μ f.	
Anode 1 to all other electrodes	15 μ f.	
Cathode to all other electrodes	12 μ f.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Electrostatic.	
Deflecting Method	Magnetic.	
Overall Length	575 $\pm$ 10 mm.	
Greatest Diameter of Bulb	385 mm.	
Minimum Useful Screen Diameter	330 m.m	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8.	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Anode 1.

Pin 3—Anode 2.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—Cathode.

Pin 7—Heater.

Pin 8—Heater.

Cap—Final Anode.

Maximum Ratings :

Final Anode Voltage 12000 volts.

Anode 1 Voltage 2200 volts.

Modulator Voltage :

Negative bias value 145 volts.

Positive bias value 0 volts.

Peak Heater-Cathode Voltages :

Heater negative with respect to cathode 125 volts.

Heater positive with respect to cathode 125 volts.

Typical Operating Conditions :

Final Anode Voltage 10000 volts.

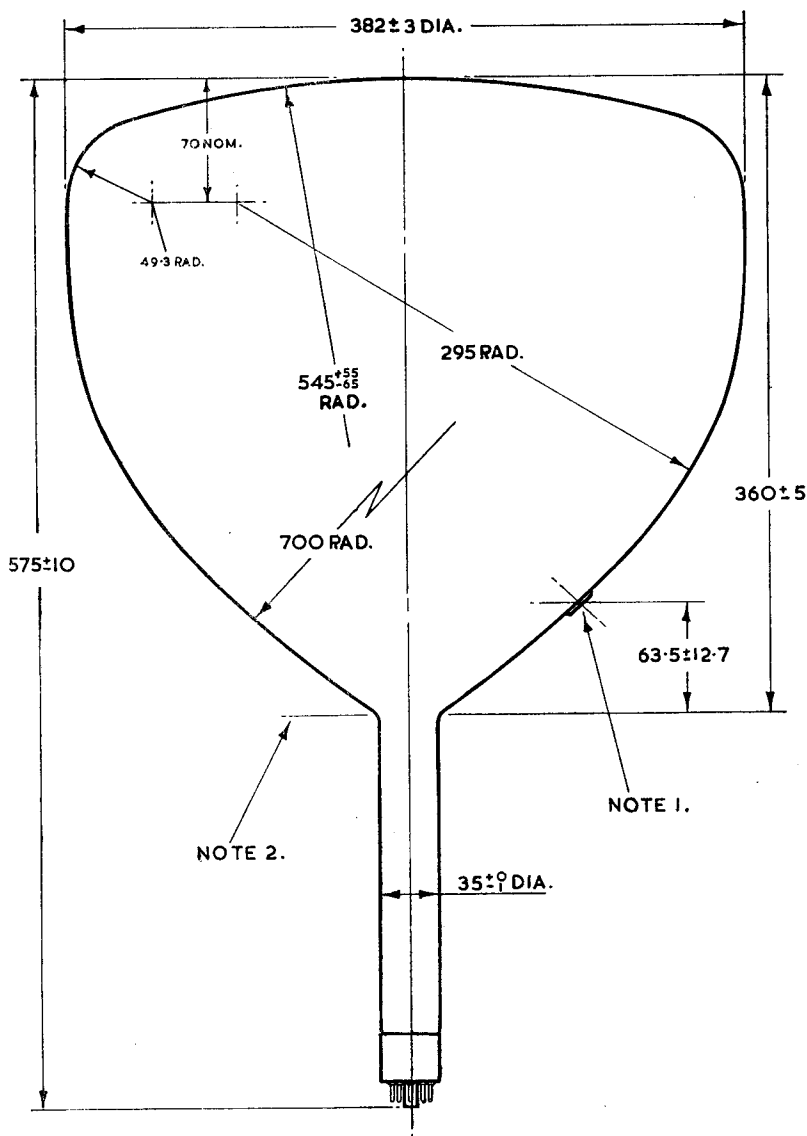
Anode 2 Voltage 1600 $\pm$ 100 volts.

Anode 1 Voltage—See Note 3 2000 volts.

Modulator Voltage for cut-off -80 to -130 volts.

Spot Position See Note 4

Note 3. Anode 1 must always be at least 50 volts positive to Anode 2.**Note 4.** The centre of the undeflected focused spot will fall within a circle having 15 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

DIAMETER 15" NOMINAL

15M06A

Radar Tube

MAGNETIC FOCUS. MAGNETIC DEFLECTION

15M06A

DATA

GENERAL:

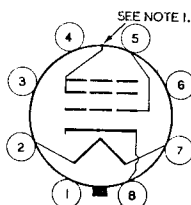
Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	12.0 μ f.	
Cathode to all other electrodes	10.0 μ f.	
Screen	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	582 $\pm$ 7 mm.	
Greatest Diameter of Bulb	385 mm.	
Minimum Useful Screen Diameter	330 mm.	
Mounting Position	Any.	
Anode Cap	Cavity Cap BSS448/CT8.	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Pin omitted.

Pin 4—Pin omitted.



Pin 5—Modulator.

Pin 6—Pin omitted.

Pin 7—Heater.

Pin 8—Cathode.

Cap—Anode.

Maximum Ratings:

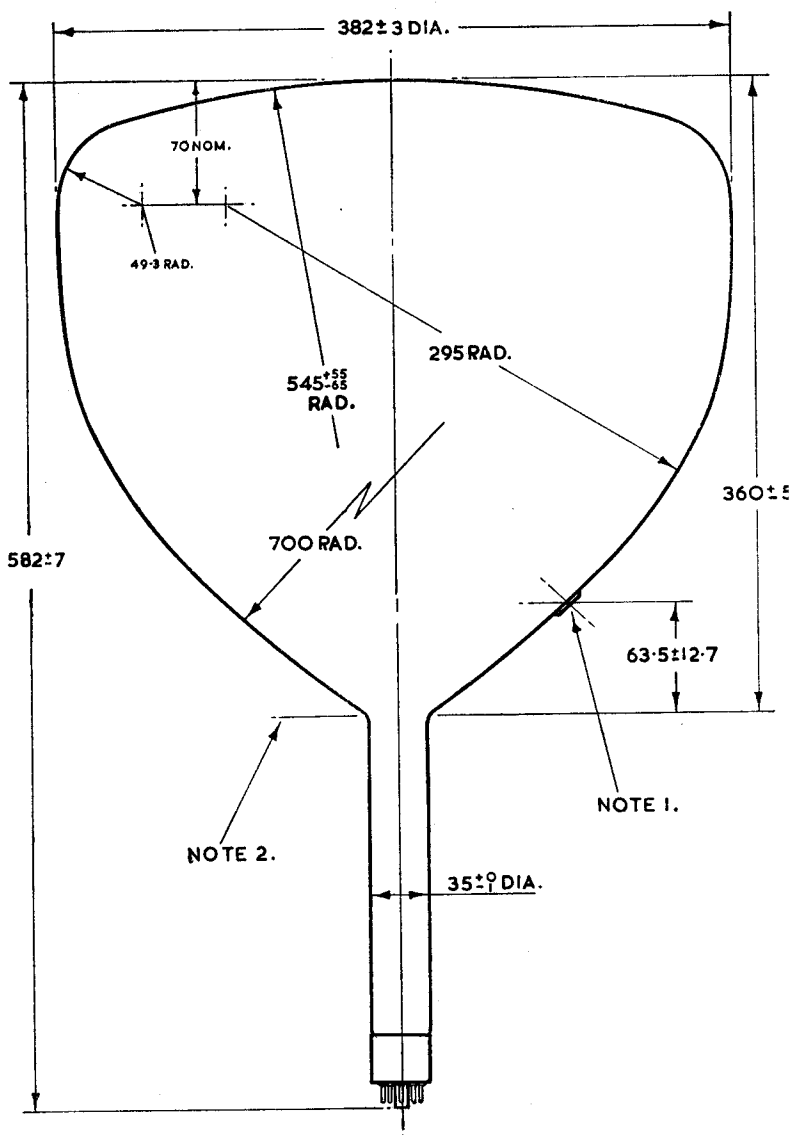
Anode Voltage	11000 volts.
Modulator Voltage	
Negative bias value	130 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages:	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions:

Anode Voltage	10000 volts.
Modulator Voltage for cut-off	-75 to -115 volts.
Focusing-Coil Current—See Note 3	600 A.T.
Spot Position	See Note 4

Note 3. Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 15 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

15T04A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

15T04A**DATA****GENERAL:**

Heater: Voltage	6.3		a.c. or d.c. volts.
Current	0.6		amp.
Direct Inter-electrode Capacitances.			
Modulator to all other electrodes			12 μ f.
Anode 1 to all other electrodes			10 μ f.
Cathode to all other electrodes			12 μ f.
Screen :			Aluminium Backed.
Fluorescence			Orange.
Afterglow			Orange.
Persistence of Afterglow			Long.
Focusing Method			Magnetic.
Deflecting Method			Magnetic.
Overall Length			580 $\pm$ 7 mm.
Greatest Diameter of Bulb			385 mm.
Minimum Useful Screen Diameter			330 mm.
Mounting Position			Any.
Anode Cap			Cavity Cap BSS448/CT8.
Base			B.12.A.

Pin 1—Heater.

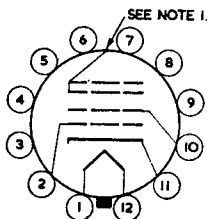
Pin 2—Modulator.

Pin 3—Pin omitted.

Pin 4—Pin omitted.

Pin 5—Pin omitted.

Pin 6—No connection.



Pin 7—No connection.

Pin 8—Pin omitted.

Pin 9—Pin omitted.

Pin 10—Anode 1.

Pin 11—Cathode.

Pin 12—Heater.

Cap—Final Anode.

Maximum Ratings:

Final Anode Voltage 15500 volts.

Anode 1 Voltage 600 volts.

Modulator Voltage :

Negative bias value 180 volts.

Positive bias value 0 volts.

Peak Heater-Cathode Voltages :

Heater negative with respect to cathode . . . 150 volts.

Heater positive with respect to cathode . . . 150 volts.

Typical Operating Conditions:

Final Anode Voltage 15000 volts.

Anode 1 Voltage 300 volts.

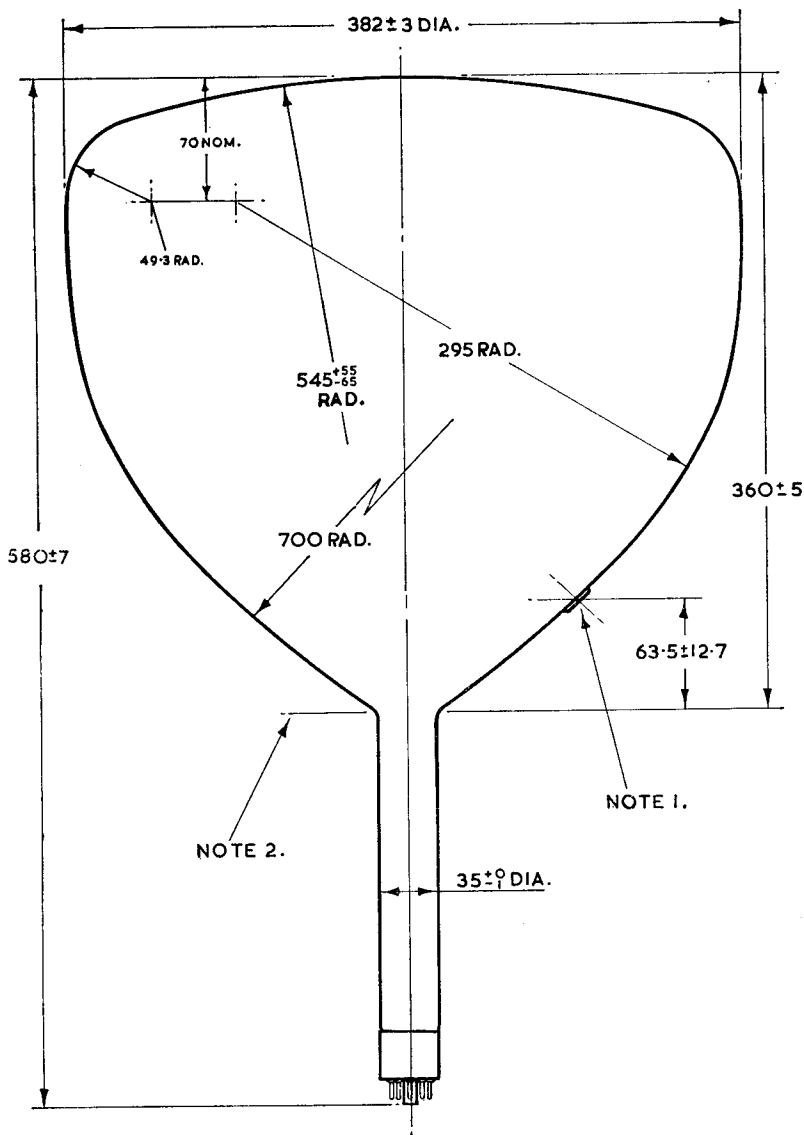
Modulator Voltage for cut-off -30 to -90 volts.

Focusing-Coil Current—See Note 3 730 A.T.

Spot Position See Note 4

Note 3. Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 15 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

DIAMETER 16" NOMINAL

16TO4A

Radar Tube

MAGNETIC FOCUS

MAGNETIC DEFLECTION

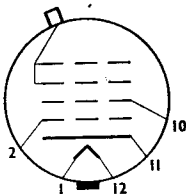
DATA**GENERAL:**

Heater : Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances		
Modulator to all other electrodes		9.0 pf.
Anode 1 to all other electrodes		6.0 pf.
Cathode to all other electrodes		8.0 pf.
Screen :		Aluminium Backed.
Fluorescence		Orange.
Afterglow		Orange.
Persistence of Afterglow		Long.
Focusing Method		Magnetic.
Deflecting Method		Magnetic.
Overall Length		512 $\pm$ 5 mm.
Greatest Diameter of Bulb		409 mm.
Minimum Useful Screen Diameter		370 mm.
Mounting Position		Any.
Anode Cap		BSS448/C.T.7.
Base		B12A.

Pin 1—Heater

Pin 2—Grid

Pin 6—No connection



Pin 10—Anode 1

Pin 11—Cathode

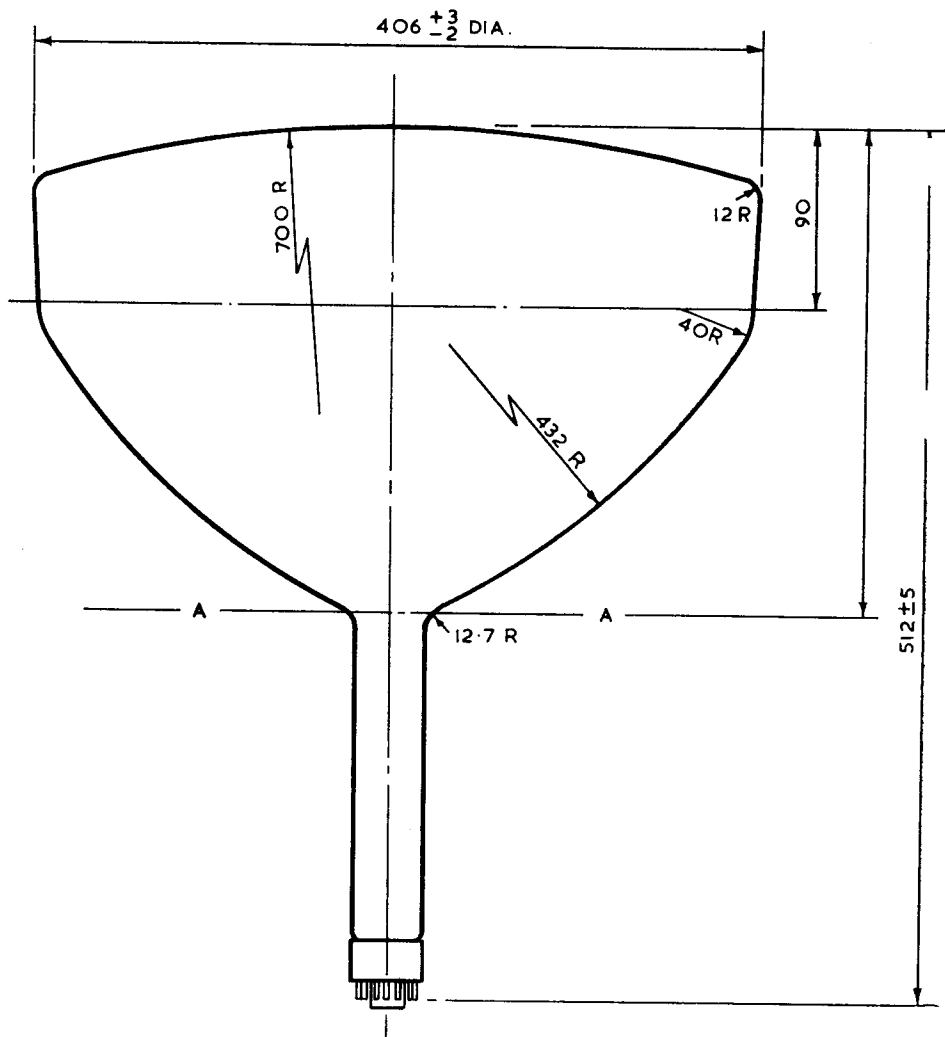
Pin 12—Heater

Maximum Ratings :

Final Anode Voltage	16.0 kV.
Anode 1 Voltage	600 volts.
Modulator Voltage :	
Negative bias value	-180 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	150 volts.
Heater positive with respect to cathode	150 volts.

Typical Operating Conditions :

Final Anode Voltage	15.0 kV.
Anode 1 Voltage	300 volts.
Modulator Voltage for cut-off	-30 to -90 volts.
Spot position	See Note 4.



DIMENSIONS IN MILLIMETRES

- Note 1.** The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.
- Note 2.** Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.
- Note 3.** Focusing coil positioned with centre line of air gap approximately 118 mm. from the reference line (see outline drawing).
- Note 4.** The centre of the undeflected focused spot will fall within a circle having 15 mm. radius concentric with the centre of the tube face.

Oscilloscope Tube

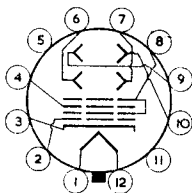
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

DATA

GENERAL:

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	11.0 μ f.	
Each X Plate to all other electrodes	11.0 μ f.	
Each Y Plate to all other electrodes	10.0 μ f.	
Deflector Plates X1 to X2	4 μ f.	
Deflector Plates Y1 to Y2	4 μ f.	
Screen :		
Fluorescence	Blue.	
Persistence	Very Short.	
	(10 μ sec. max. for 1% initial brightness).	
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	194 $\pm$ 5 mm.	
Greatest Diameter of Bulb	52.4 mm.	
Minimum Useful Screen Diameter	44 mm.	
Mounting Position	Any.	
Base	B.12.A.	

Pin 1—Heater.
 Pin 2—Modulator.
 Pin 3—Cathode.
 Pin 4—Anode 2.
 Pin 5—Pin omitted.
 Pin 6—Y1.



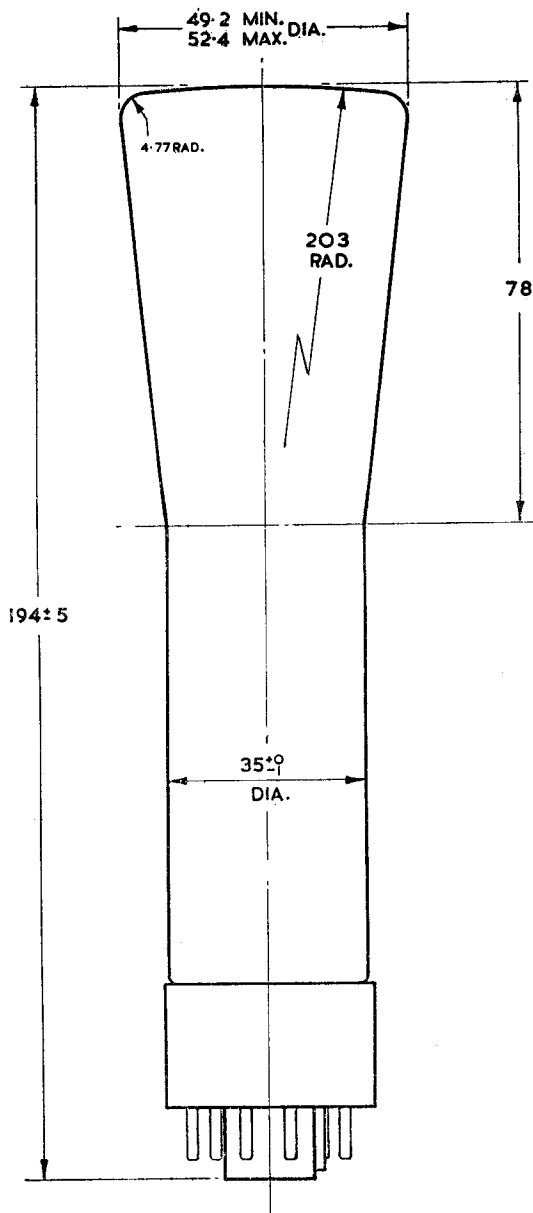
Pin 7—Y2.
 Pin 8—Anode 1 and Anode 3.
 Pin 9—X2.
 Pin 10—X1.
 Pin 11—Pin omitted.
 Pin 12—Heater.

Typical Operating Conditions :

Anode 1 (2500v. max.)	1000 volts.	2000 volts.
Anode 2	150/280 volts.	300/560 volts.
Anode 3 (2500v. max.)	1000 volts.	2000 volts.
Modulator volts for cut-off	-65 volts. max.	-130 volts max.
Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.16 to 0.22	0.08 to 0.11
Y Plate	0.25 to 0.34	0.125 to 0.17

Note 2. The angle between the traces 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 5 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 Pin No. 1 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.

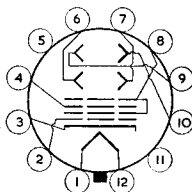
2EG1**2EG1****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

DATA**GENERAL :**

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes		11.0 μ f.
Each X Plate to all other electrodes		11.0 μ f.
Each Y Plate to all other electrodes		10.0 μ f.
Deflector Plates X1 to X2		4 μ f.
Deflector Plates Y1 to Y2		4 μ f.
Screen :		
Fluorescence		Green.
Persistence		Short.
(10m sec. min./100m sec. max. for 1% initial brightness).		
Focusing Method		Electrostatic.
Deflecting Method		Electrostatic.
Overall Length		194 $\pm$ 5 mm.
Greatest Diameter of Bulb		52.4 mm.
Minimum Useful Screen Diameter		44 mm.
Mounting Position		Any.
Base		B.12.A.

Pin 1—Heater.
 Pin 2—Modulator.
 Pin 3—Cathode.
 Pin 4—Anode 2.
 Pin 5—Pin omitted.
 Pin 6—Y1.



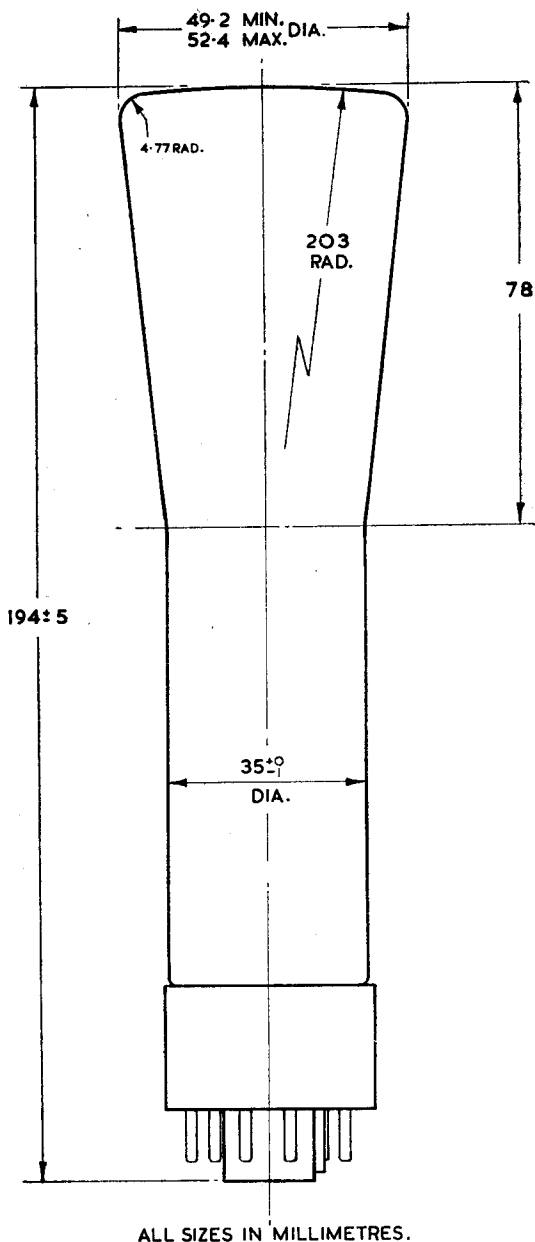
Pin 7—Y2.
 Pin 8—Anode 1 and Anode 3.
 Pin 9—X2.
 Pin 10—X1.
 Pin 11—Pin omitted.
 Pin 12—Heater.

Typical Operating Conditions :

Anode 1 (2500v. max.)	1000 volts.	2000 volts.
Anode 2	150/280 volts.	300/560 volts.
Anode 3 (2500v. max.)	1000 volts.	2000 volts.
Modulator volts for cut-off	-65 volts max.	-130 volts max.
Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.16 to 0.22	0.08 to 0.11
Y Plate	0.25 to 0.34	0.125 to 0.17

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

Note 3. The undeflected focused spot will fall within a circle having a 5 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 Pin No. 1 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.

DIAMETER 2½" NOMINAL

3EB1**3EB1**

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 13 μ f.Each X Plate to all other electrodes 21 μ f.Each Y Plate to all other electrodes 21 μ f.One X to one Y Deflector Plate 4 μ f.Cathode to all other electrodes 12 μ f.

Screen :

Fluorescence Blue.

Persistence Very Short.

(10 μ sec. max. for 1% initial brightness).

Focusing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 255 $\pm$ 5 mm.

Greatest Diameter of Bulb 70 mm.

Minimum Useful Screen Diameter 55 mm.

Mounting Position Any.

Anode Cap Recessed Small Ball.

Base B.12.B.

Pin 1—Cathode.

Pin 2—Modulator.

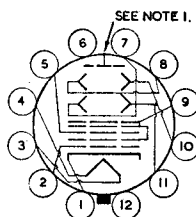
Pin 3—Heater.

Pin 4—Heater.

Pin 5—Anode 2.

Pin 6—Pin omitted.

Pin 7—Y2.



Pin 8—X2.

Pin 9—Anode 1,
Anode 3 and Internal
Conductive coating.

Pin 10—X1.

Pin 11—Y1.

Pin 12—Pin omitted.

Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 (2500v. max.) . . . 2000 volts. 1300 volts.

Anode 2 130 volts. 100 volts.

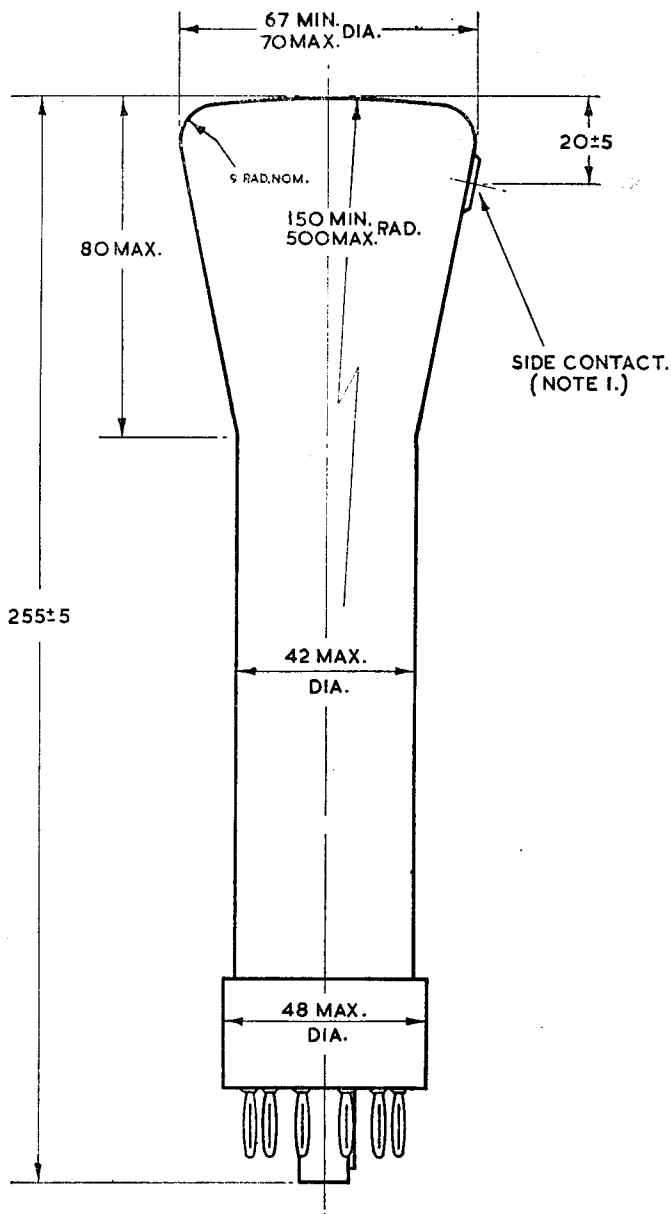
Anode 3 (2500v. max.) . . . 2000 volts. 1300 volts.

Anode 4 Post Deflector Accelerator (5KV max.)
4000 volts. 2500 volts.Modulator volts for cut-off
-65 to -145 volts. -45 to -100 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.125	0.190
Y Plate	0.145	0.220

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

Note 3. The undeflected focused spot will fall within a circle having a 7 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.

3EB3P**3EB3P**

Oscilloscope Tube

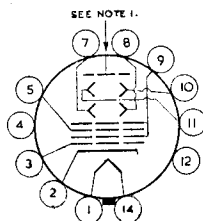
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage	 6.3	 a.c. or d.c. volts.
Current	 0.6	 amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes		10.5 μ f.
Each X Plate to all other electrodes		11.0 μ f.
Each Y Plate to all other electrodes		9.0 μ f.
Deflector Plates X1 to X2		4.0 μ f.
Deflector Plates Y1 to Y2		3.5 μ f.
Screen:		
Fluorescence		Blue.
Persistence		Very Short
	(10 μ sec. max. for 1% of initial brightness).	
Focussing Method		Electrostatic.
Deflecting Method		Electrostatic.
Overall Length		254 $\pm$ 6 mm.
Greatest Diameter of Bulb		77.8 mm.
Minimum Useful Screen Diameter		69.0 mm.
Mounting Position		Any.
Anode Cap		Recessed Ball BSS448/CT7.
Base		B.14A.

Pin 1—Heater.
 Pin 2—Cathode.
 Pin 3—Modulator.
 Pin 4—No connection.
 Pin 5—Anode 2.
 Pin 7—Y1.



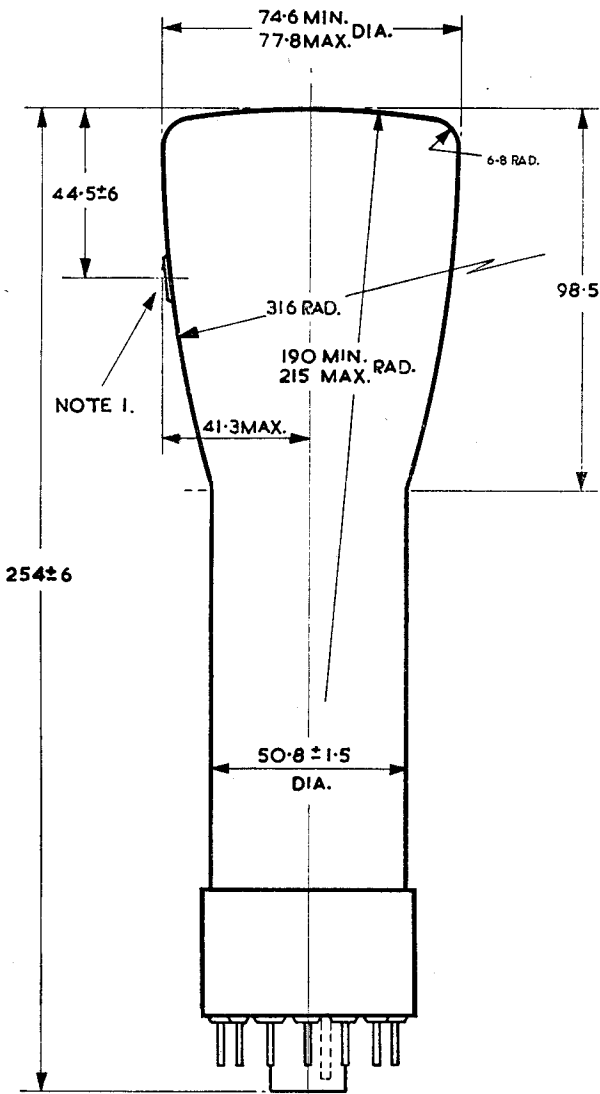
Pin 8—Y2.
 Pin 9—Anode 1 and Anode 3.
 Pin 10—X2.
 Pin 11—X1.
 Pin 12—No connection.
 Pin 14—Heater.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 and Anode 3 (2500 volts max.)	 1500 volts.
Anode 2	 350/500 volts.
Anode 4 P.D.A. (5000 volts max.)	 3000 volts.
Modulator volts for cut-off	 -65 volts max.

Deflection Sensitivity :

	mm./volt
X Plate	 0.15 to 0.2
Y Plate	 0.2 to 0.27



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by X1, X2 and a plane through the tube axis, Pin 5 and the P.D.A. Cap may vary by an angular tolerance of 10° . The P.D.A. Cap is on the same side of the tube as Pin 5.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that Pin No. 5 is on the left, 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.

3ED1**3ED1**

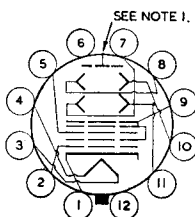
Oscilloscope Tube

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	13 μ uf.	
Each X Plate to all other electrodes	21 μ uf.	
Each Y Plate to all other electrodes	21 μ uf.	
One X to one Y Deflector Plate	4 μ uf.	
Cathode to all other electrodes	12 μ uf.	
Screen :		
Fluorescence	Blue.	
Afterglow	Yellow.	
Persistence of Afterglow	Long.	
	(10 sec. min./100 sec. max. for 1% initial brightness).	
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	255 $\pm$ 5 mm.	
Greatest Diameter of Bulb	70 mm.	
Minimum Useful Screen Diameter	55 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	B.12.B.	

- Pin 1—Cathode.
 Pin 2—Modulator.
 Pin 3—Heater.
 Pin 4—Heater.
 Pin 5—Anode 2.
 Pin 6—Pin omitted.
 Pin 7—Y2.



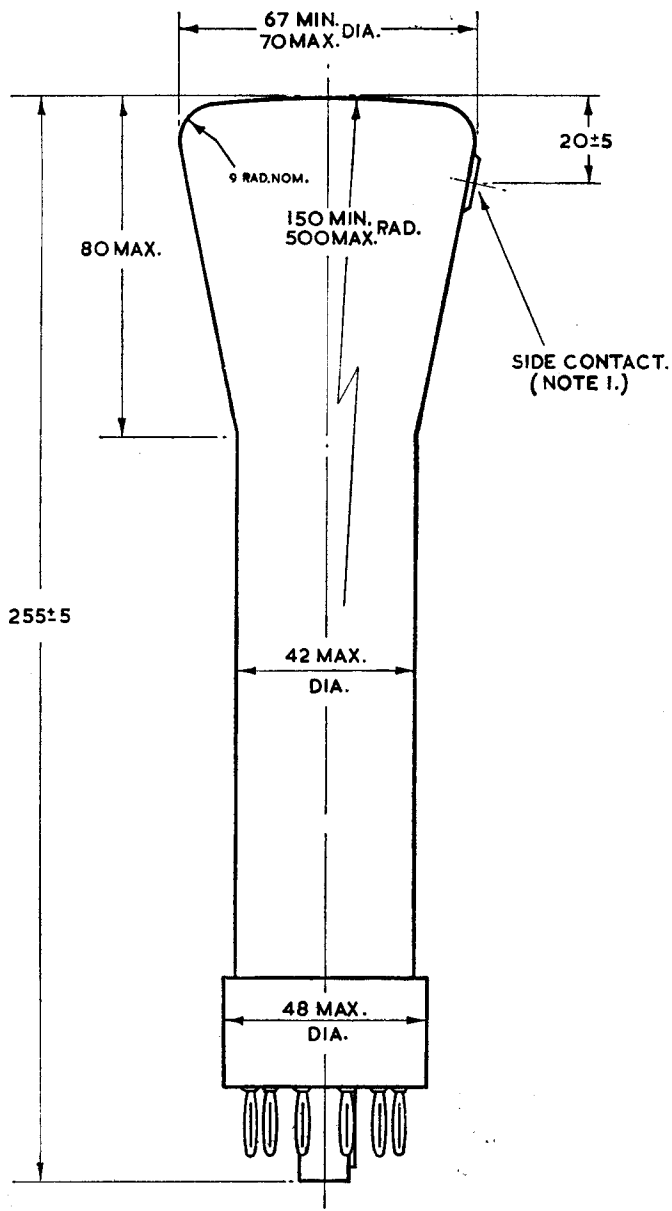
- Pin 8—X2.
 Pin 9—Anode 1,
 Anode 3 and Internal
 Conductive coating.
 Pin 10—X1.
 Pin 11—Y1.
 Pin 12—Pin omitted.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 (2500v. max.)	2000 volts.	1300 volts.
Anode 2	130 volts.	100 volts.
Anode 3 (2500v. max.)	2000 volts.	1300 volts.
Anode 4 Post Deflector Accelerator (5KV max.)	4000 volts.	2500 volts.
Modulator volts for cut-off		
	-50 to -105 volts.	-35 to -70 volts.
Deflection Sensitivity :		
	mm/volt.	mm/volt.
X Plate	0.125	0.190
Y Plate	0.145	0.220

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 7 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.

3ED2**3ED2**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage 6.3 a.c. or d.c. volts.
 Current 0.6 amp.

Direct Inter-electrode Capacitances:

Modulator to all other electrodes 12 μ f.
 Each X Plate to all other electrodes 16 μ f.
 Each Y Plate to all other electrodes 11 μ f.
 Deflector Plates X1 to X2 2.5 μ f.
 Deflector Plates Y1 to Y2 2.5 μ f.

Screen:

Fluorescence Blue.
 Afterglow Yellow.
 Persistence of Afterglow Long
 (10 sec. min./100 sec. max. for 1% initial brightness).

Focussing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length. 292 $\pm$ 9 mm.

Greatest Diameter of Bulb 77.8 mm.

Minimum Useful Screen Diameter 69.0 mm.

Mounting Position Any.

Base 11 Pin Magnal.

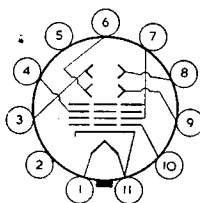
Pin 1—Heater.

Pin 2—No connection.

Pin 3—X1.

Pin 4—Anode 2.

Pin 5—No connection.



Pin 6—Y2.

Pin 7—Anode 1 and 3.

Pin 8—X2.

Pin 9—Y1.

Pin 10—Modulator.

Pin 11—Heater and Cathode.

Typical Operating Conditions:

Anode 1 and 3 (2500 volts max.)

1000 volts

2000 volts.

Anode 2 200/280 volts

400/560 volts.

Modulator volts for cut-off -50 volts max.

-100 volts max.

Deflection Sensitivity:

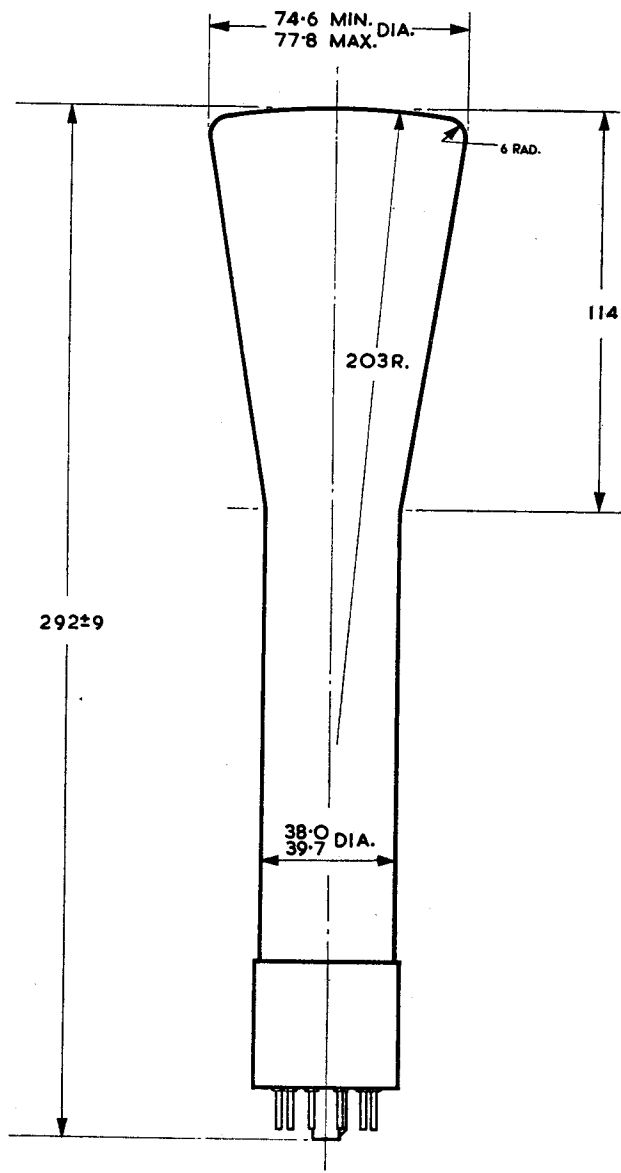
X Plate mm/volt
 0.26 to 0.4

Y Plate 0.3 to 0.45

mm./volt.

0.13 to 0.2

0.15 to 0.22



ALL SIZES IN MILLIMETRES.

- Note 1.** When viewing the screen with the tube positioned such that the spigot key is uppermost, a positive voltage applied to terminal X1 will deflect the spot to the left and a positive voltage applied to the terminal Y1 will deflect the spot upwards.
- Note 2.** The angle between the trace produced by X1 and X2 and the trace produced by Y1 and Y2 is $90^\circ + 3^\circ$.
- Note 3.** The undeflected focused spot will fall within a circle having a 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** The angle between the trace produced by the deflector plates Y1, Y2 and a plane through the tube axis and Pin No. 6, may vary by an angular tolerance of 10° .

3ED3P**3ED3P**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage 6.3 a.c. or d.c. volts.
 Current 0.6 amp.

Direct Inter-electrode Capacitances:

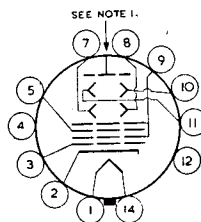
Modulator to all other electrodes 10.5 μ f.
 Each X Plate to all other electrodes 11.0 μ f.
 Each Y Plate to all other electrodes 9.0 μ f.
 Deflector Plates X1 to X2 4.0 μ f.
 Deflector Plates Y1 to Y2 3.5 μ f.

Screen:

Fluorescence Blue.
 Afterglow Yellow.
 Persistence of Afterglow Long
 (10 sec. min./100 sec. max. for 1% initial brightness).

Focussing Method Electrostatic.
 Deflecting Method Electrostatic.
 Overall Length 254 $\pm$ 6 mm.
 Greatest Diameter of Bulb 77.8 mm.
 Minimum Useful Screen Diameter 69.0 mm.
 Mounting Position Any.
 Anode Cap Recessed Ball
 BSS448/CT7.
 Base B14A.

Pin 1—Heater.
 Pin 2—Cathode.
 Pin 3—Modulator.
 Pin 4—No connection.
 Pin 5—Anode 2.
 Pin 7—Y1.



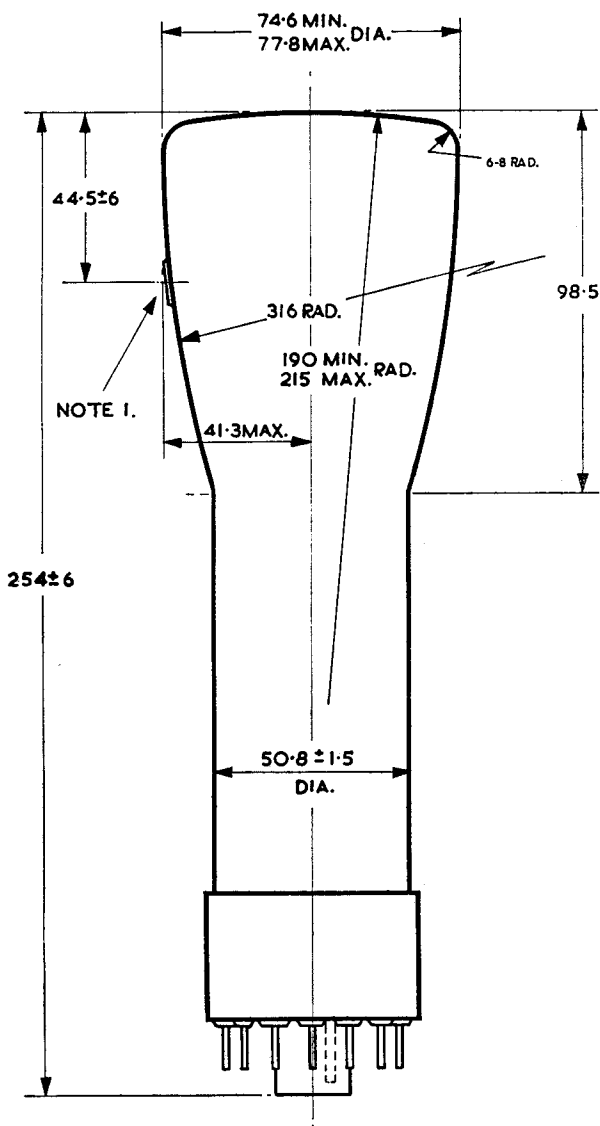
Pin 8—Y2.
 Pin 9—Anode 1 and
 Anode 3.
 Pin 10—X2.
 Pin 11—X1.
 Pin 12—No connection.
 Pin 14—Heater.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 and Anode 3 (2500 volts max.) 1500 volts.
 Anode 2 350/500 volts.
 Anode 4 P.D.A. (5000 volts max.) 3000 volts.
 Modulator volts for cut-off -65 volts max.

Deflection Sensitivity :

mm./volts.
 X Plate 0.15 to 0.2
 Y Plate 0.2 to 0.27



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by X1, X2 and a plane through the tube axis, Pin 5 and the P.D.A. Cap may vary by an angular tolerance of 10° . The P.D.A. Cap is on the same side of the tube as Pin 5.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that Pin No. 5 is on the left, 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.

3EG1**3EG1**

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 13 μ f.
 Each X Plate to all other electrodes 21 μ f.
 Each Y Plate to all other electrodes 21 μ f.
 One X to one Y Deflector Plate 4 μ f.
 Cathode to all other electrodes 12 μ f.

Screen :

Fluorescence Green.

Persistence Short.

(10m sec. min./100m sec. max. for 1% initial brightness).

Focusing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 255 $\pm$ 5 mm.

Greatest Diameter of Bulb 70 mm.

Minimum Useful Screen Diameter 55 mm.

Mounting Position Any.

Anode Cap Recessed Small Ball.

Base B.12.B.

Pin 1—Cathode.

Pin 2—Modulator.

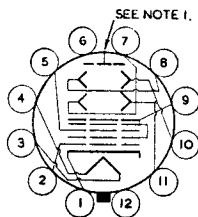
Pin 3—Heater.

Pin 4—Heater.

Pin 5—Anode 2.

Pin 6—Pin omitted.

Pin 7—Y2.



Pin 8—X2.

Pin 9 — Anode 1,
Anode 3 and Internal
Conductive coating.

Pin 10—X1.

Pin 11—Y1.

Pin 12—Pin omitted.

Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 (2500v. max.) 2000 volts. 1300 volts.

Anode 2 130 volts. 100 volts.

Anode 3 (2500v. max.) 2000 volts. 1300 volts.

Anode 4 Post Deflector Accelerator (5KV max.) 4000 volts. 2500 volts.

Modulator volts for cut-off -65 to -145 volts. -45 to -100 volts.

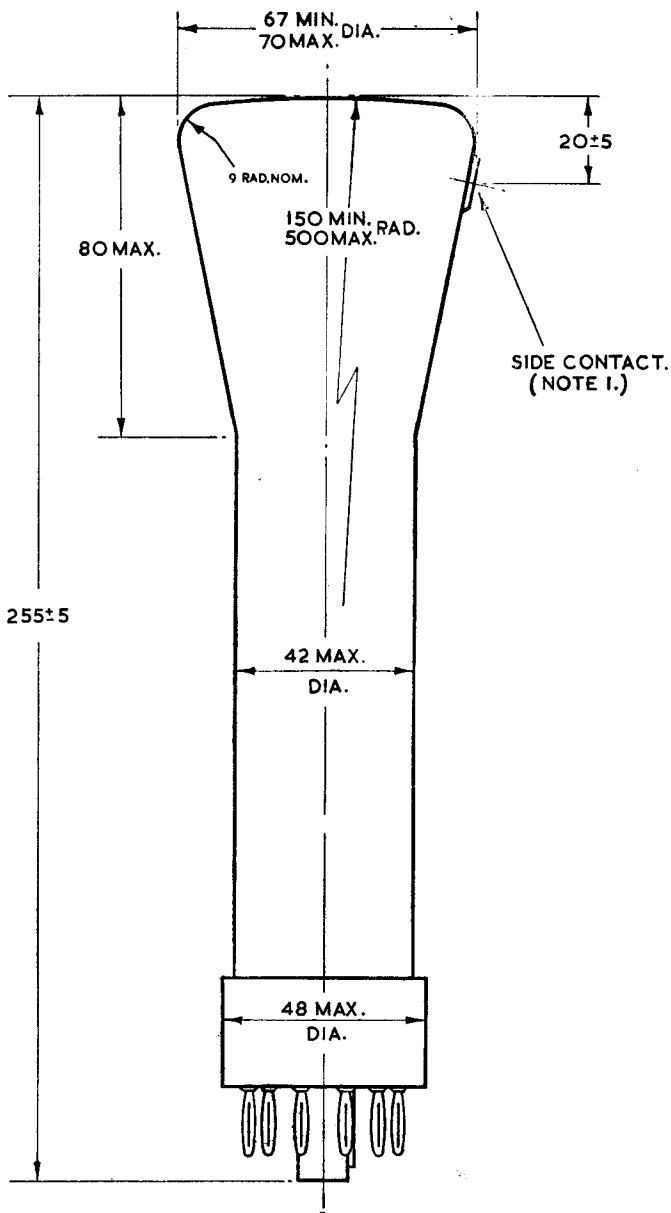
Deflection Sensitivity : mm /volt. mm/volt.

X Plate 0.125 0.190

Y Plate 0.145 0.220

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 7 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.

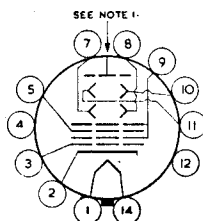
3EG3P**3EG3P****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA**GENERAL :**

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	10.5 μ f.	
Each X Plate to all other electrodes	11.0 μ f.	
Each Y Plate to all other electrodes	9.0 μ f.	
Deflector Plates X1 to X2	4.0 μ f.	
Deflector Plates Y1 to Y2	3.5 μ f.	
Screen:		
Fluorescence	Green.	
Persistence	Short	
(10m. sec. min./100m. sec. max. for 1% initial brightness).		
Focussing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	254 mm. $\pm$ 6 mm.	
Greatest Diameter of Bulb	77.8mm.	
Minimum Useful Screen Diameter	69.0 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Ball BSS448/CT7.	
Base	B14A.	

Pin 1—Heater.
 Pin 2—Cathode.
 Pin 3—Modulator.
 Pin 4—No connection.
 Pin 5—Anode 2.
 Pin 7—Y1.



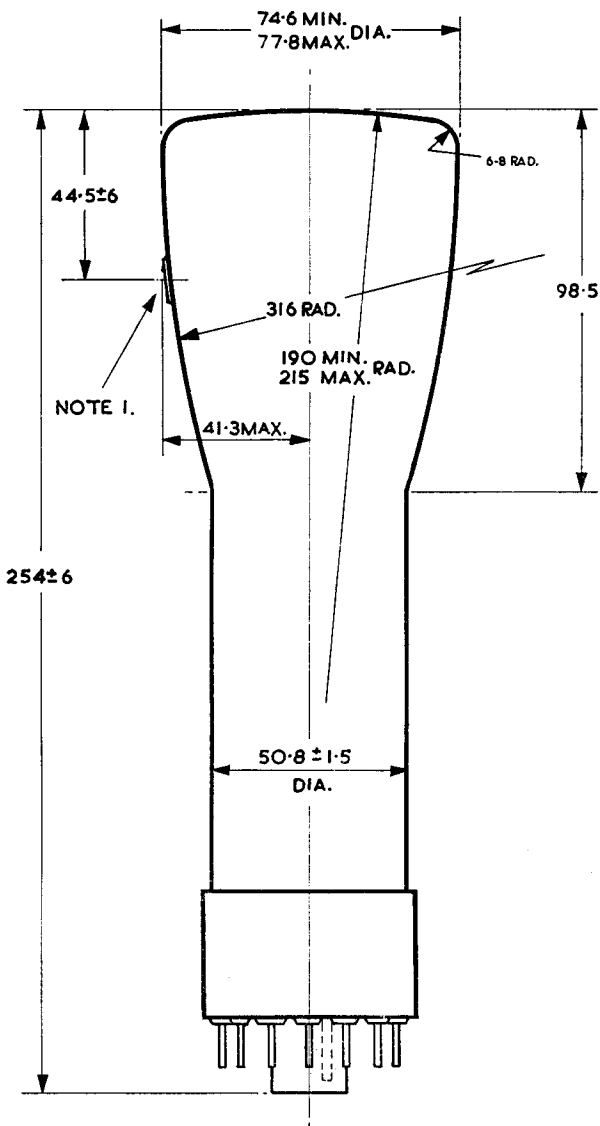
Pin 8—Y2.
 Pin 9—Anode 1 and Anode 3.
 Pin 10—X2.
 Pin 11—X1.
 Pin 12—No connection.
 Pin 14—Heater.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 and Anode 3 (2500 volts max.)	1500 volts.
Anode 2	350/500 volts.
Anode 4 P.D.A. (5000 volts max.)	3000 volts.
Modulator volts for cut-off	-65 volts max.

Deflection Sensitivity :

	mm./volt.
X Plate	0.15 to 0.2
Y Plate	0.2 to 0.27



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by X1, X2 and a plane through the tube axis, Pin 5 and the P.D.A. Cap may vary by an angular tolerance of 10° . The P.D.A. Cap is on the same side of the tube as Pin 5.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that Pin No. 5 is on the left, 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.

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 13 μ mf.

Each X Plate to all other electrodes 21 μ mf.

Each Y Plate to all other electrodes 21 μ mf.

One X to one Y Deflector Plate 4 μ mf.

Cathode to all other electrodes 12 μ mf.

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 255 $\pm$ 5 mm.

Greatest Diameter of Bulb 70 mm.

Minimum Useful Screen Diameter 55 mm.

Mounting Position Any.

Anode Cap Recessed Small Ball.

Base B.12.B.

Pin 1—Cathode.

Pin 2—Modulator.

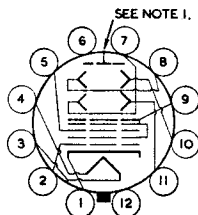
Pin 3—Heater.

Pin 4—Heater.

Pin 5—Anode 2.

Pin 6—Pin omitted.

Pin 7—Y2.



Pin 8—X2.

Pin 9—Anode 1,
Anode 3 and Internal
Conductive coating.

Pin 10—X1.

Pin 11—Y1.

Pin 12—Pin omitted.

Cap—Anode 4 P.D.A.

Typical Operating Conditions:

Anode 1 (2500v. max.) 2000 volts. 1300 volts.

Anode 2 130 volts. 100 volts.

Anode 3 (2500v. max.) 2000 volts. 1300 volts.

Anode 4 Post Deflector Accelerator (5KV. max.)
 4000 volts. 4000 volts.

Modulator volts for cut-off
 -65 to -145 volts. -45 to -100 volts.

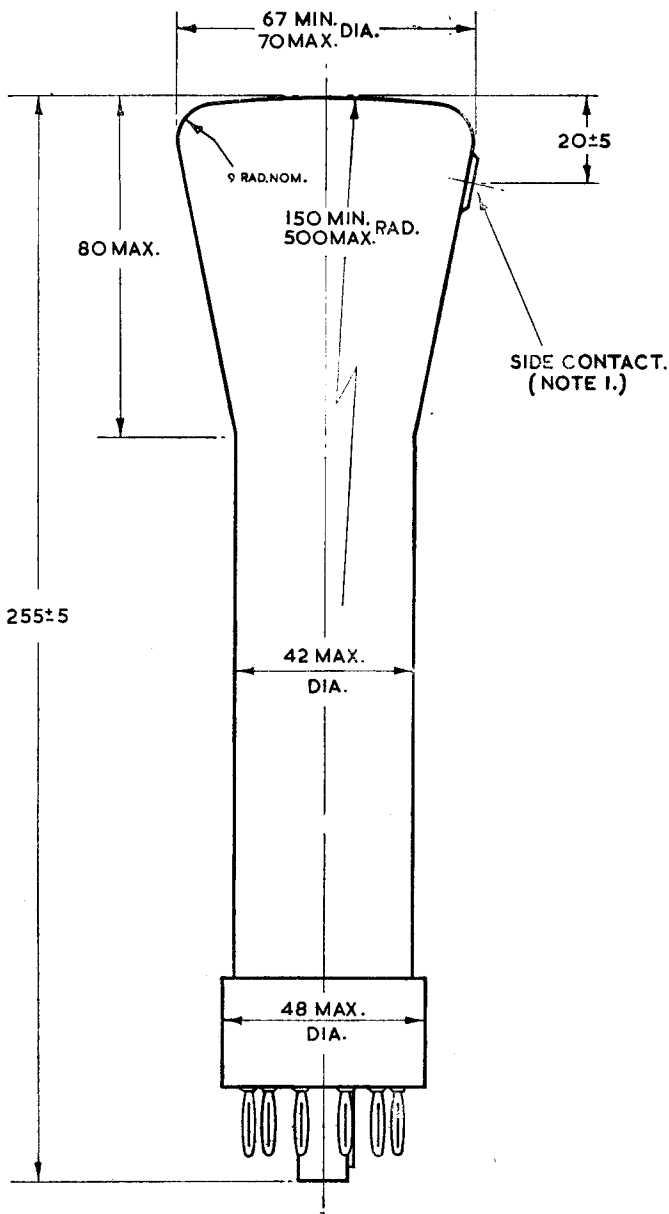
Deflection Sensitivity: mm/volt. mm/volt.

X Plate 0.125 0.190

Y Plate 0.145 0.220

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 7 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.

3E03P**3E03P**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage 6.3 a.c. or d.c. volts.
 Current 0.6 amp.

Direct Inter-electrode Capacitances:

Modulator to all other electrodes . . . 10.5 μ f.
 Each X Plate to all other electrodes . . . 11.0 μ f.
 Each Y Plate to all other electrodes . . . 9.0 μ f.
 Deflector Plates X1 to X2 . . . 4.0 μ f.
 Deflector Plates Y1 to Y2 . . . 3.5 μ f.

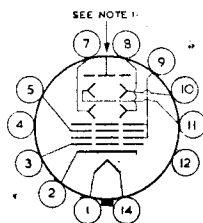
Screen:

Fluorescence Orange.
 Afterglow Orange.
 Persistence of Afterglow Long

(10 sec. min/100 sec. max. for 1% initial brightness).

Focussing Method Electrostatic.
 Deflecting Method Electrostatic.
 Overall Length 254 $\pm$ 6 mm.
 Greatest Diameter of Bulb 77.8 mm.
 Minimum Useful Screen Diameter 69.0 mm.
 Mounting Position Any.
 Anode Cap Recessed Ball
 BSS448/CT7.
 Base B14A.

Pin 1—Heater.
 Pin 2—Cathode.
 Pin 3—Modulator.
 Pin 4—No connection.
 Pin 5—Anode 2.
 Pin 7—Y1.



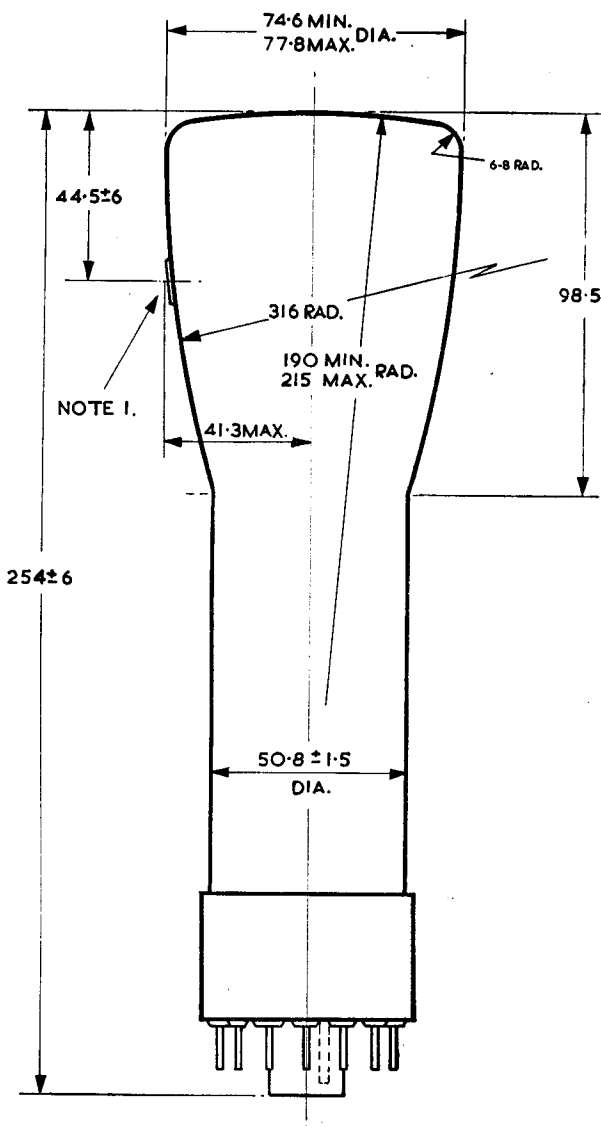
Pin 8—Y2.
 Pin 9—Anode 1 and
 Anode 3.
 Pin 10—X2.
 Pin 11—X1.
 Pin 12—No connection.
 Pin 14—Heater.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 and Anode 3 (2500 volts max.) . . . 1500 volts.
 Anode 2 350/500 volts.
 Anode 4 P.D.A. (5000 volts max.) . . . 3000 volts.
 Modulator volts for cut-off -65 volts max.

Deflection Sensitivity :

mm./volt.
 X Plate 0.15 to 0.2
 Y Plate 0.2 to 0.27



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by X1, X2 and a plane through the tube axis, Pin 5 and the P.D.A. Cap may vary by an angular tolerance of 10° . The P.D.A. Cap is on the same side of the tube as Pin 5.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that Pin No. 5 is on the left, 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.

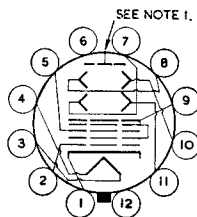
3EW1**3EW1****Oscilloscope Tube**

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	13 μ f.	
Each X Plate to all other electrodes	21 μ f.	
Each Y Plate to all other electrodes	21 μ f.	
One X to one Y Deflector Plate	4 μ f.	
Cathode to all other electrodes	12 μ f.	
Screen :		
Fluorescence	White.	
Persistence	Short.	
(5m sec. min./25m sec. max. for 1% initial brightness).		
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	255 $\pm$ 5 mm.	
Greatest Diameter of Bulb	70 mm.	
Minimum Useful Screen Diameter	55 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	B.12.B.	

Pin 1—Cathode.
 Pin 2—Modulator.
 Pin 3—Heater.
 Pin 4—Heater.
 Pin 5—Anode 2.
 Pin 6—Pin omitted.
 Pin 7—Y2.



Pin 8—X2.
 Pin 9—Anode 1,
 Anode 3 and Internal
 Conductive coating.
 Pin 10—X1.
 Pin 11—Y1.
 Pin 12—Pin omitted.
 Cap—Anode 4 P.D.A.

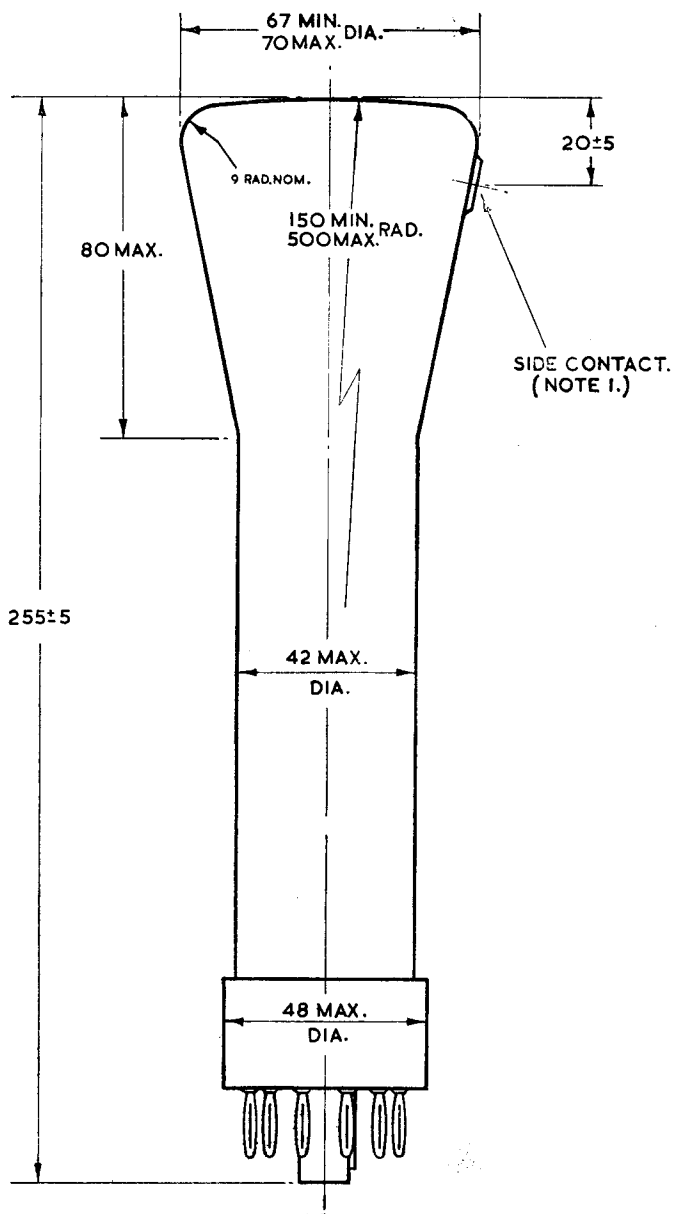
Typical Operating Conditions :

Anode 1 (2500v. max.)	2000 volts.	1300 volts.
Anode 2	130 volts.	100 volts.
Anode 3 (2500v. max.)	2000 volts.	1300 volts.
Anode 4 Post Deflector Accelerator (5KV max.)	4000 volts.	2500 volts.
Modulator volts for cut-off	-65 to -145 volts.	-45 to -100 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.125	0.190
Y Plate	0.145	0.220

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 7 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.

3EY1**3EY1**

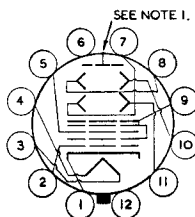
Oscilloscope Tube

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	13 μ f.		
Each X Plate to all other electrodes	21 μ f.		
Each Y Plate to all other electrodes	21 μ f.		
One X to one Y Deflector Plate	4 μ f.		
Cathode to all other electrodes	12 μ 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	255 $\pm$ 5 mm.		
Greatest Diameter of Bulb	70 mm.		
Minimum Useful Screen Diameter	55 mm.		
Mounting Position	Any.		
Anode Cap	Recessed Small Ball.		
Base	B.12.B.		

- Pin 1—Cathode.
 Pin 2—Modulator.
 Pin 3—Heater.
 Pin 4—Heater.
 Pin 5—Anode 2.
 Pin 6—Pin omitted.
 Pin 7—Y2.



- Pin 8—X2.
 Pin 9—Anode 1,
 Anode 3 and Internal
 Conductive coating.
 Pin 10—X1.
 Pin 11—Y1.
 Pin 12—Pin omitted.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 (2500v. max.)	2000 volts.	1300 volts.
Anode 2	130 volts.	100 volts.
Anode 3 (2500v. max.)	2000 volts.	1300 volts.
Anode 4 Post Deflector Accelerator (5KV max.)	4000 volts.	2500 volts.

Modulator volts for cut-off

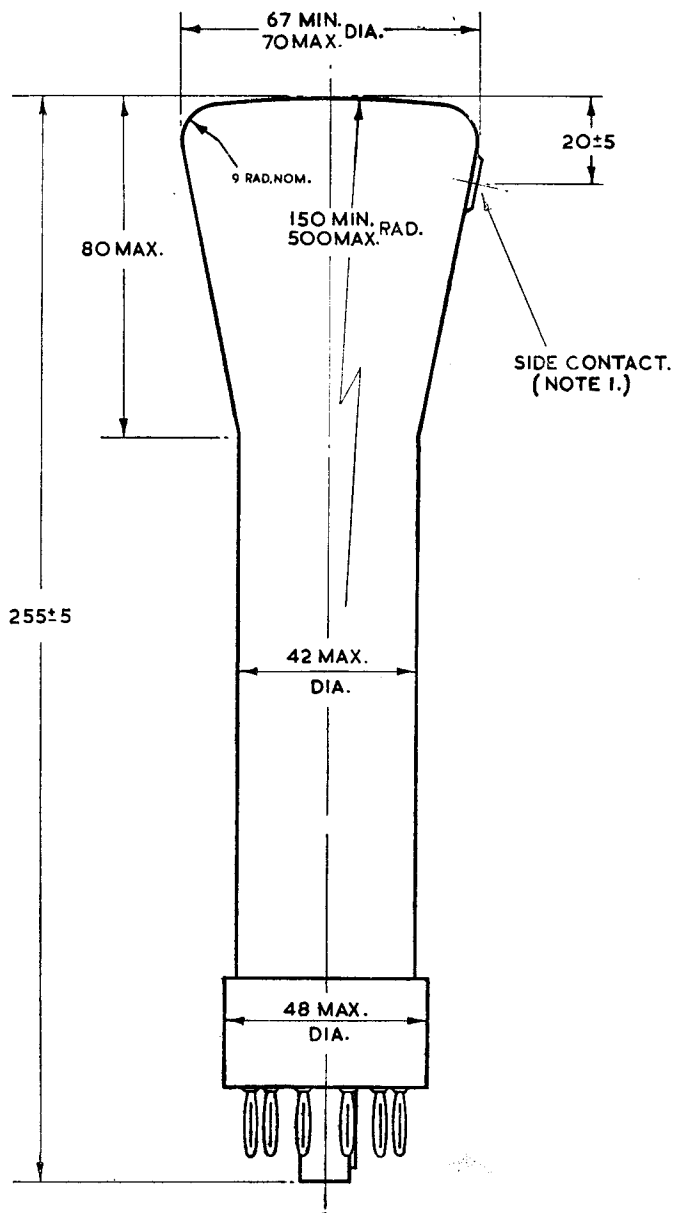
-65 to -145 volts. -45 to -100 volts.

Deflection Sensitivity :

	mm/volt.	mm/volt.
X Plate	0.125	0.190
Y Plate	0.145	0.220

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 7 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.

3EY3P**3EY3P**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage 6.3 a.c. or d.c. volts.
 Current 0.6 amp.

Direct Inter-electrode Capacitances:

Modulator to all other electrodes . . . 10.5 μ f.
 Each X Plate to all other electrodes . . . 11.0 μ f.
 Each Y Plate to all other electrodes . . . 9.0 μ f.
 Deflector Plates X1 to X2 . . . 4.0 μ f.
 Deflector Plates Y1 to Y2 . . . 3.5 μ f.

Screen:

Fluorescence Yellow.
 Afterglow Yellow.
 Persistence of Afterglow Long
 (1 sec. min./10 sec. max. for 1% initial brightness).

Focussing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 254 $\pm$ 6 mm.

Greatest Diameter of Bulb 77.8 mm.

Minimum Useful Screen Diameter 69.0 mm.

Mounting Position Any.

Anode Cap Recessed Ball
 BSS448/CT7.

Base B14A

Pin 1—Heater.

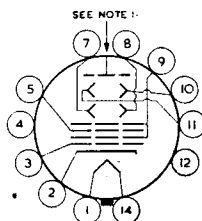
Pin 2—Cathode.

Pin 3—Modulator.

Pin 4—No connection.

Pin 5—Anode 2.

Pin 7—Y1.



Pin 8—Y2.

Pin 9—Anode 1 and
 Anode 3.

Pin 10—X2.

Pin 11—X1.

Pin 12—No connection.

Pin 14—Heater.

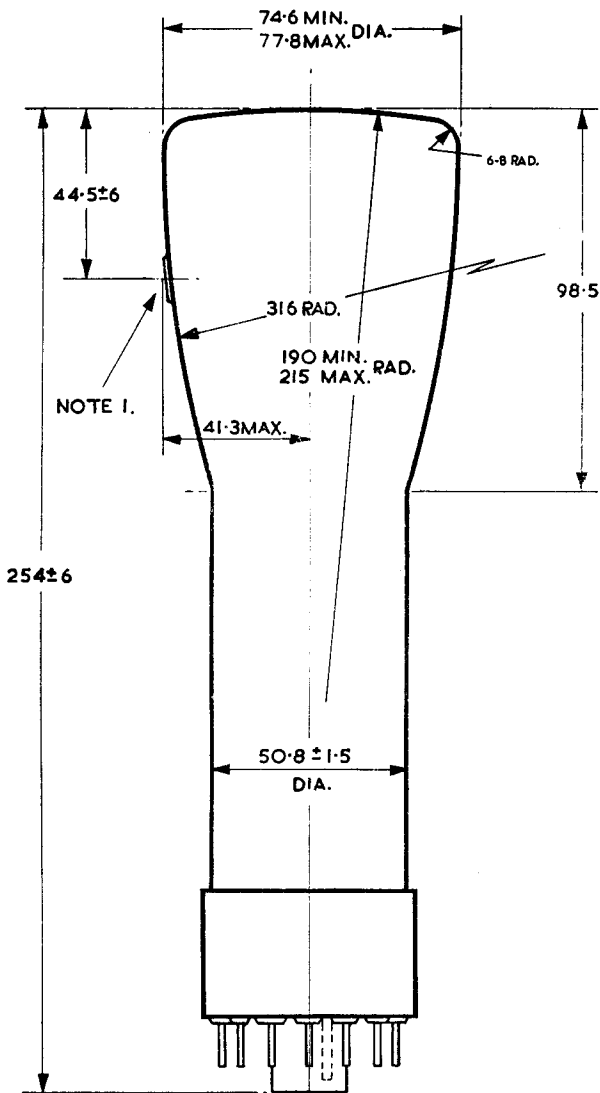
Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1 and Anode 3 (2500 volts max.) . . . 1500 volts.
 Anode 2 350/500 volts.
 Anode 4 P.D.A. (5000 volts max.) . . . 3000 volts.
 Modulator volts for cut-off -65 volts max.

Deflection Sensitivity :

mm./volt.
 X Plate 0.15 to 0.2
 Y Plate 0.2 to 0.27



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by X1, X2 and a plane through the tube axis, Pin 5 and the P.D.A. Cap may vary by an angular tolerance of 10° . The P.D.A. Cap is on the same side of the tube as Pin 5.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that Pin No. 5 is on the left, 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.

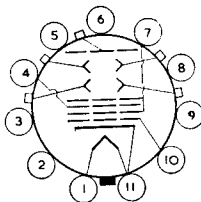
5EB2P**5EB2P****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA**GENERAL:**

Heater: Voltage	. . . 6.3	. . . a.c. or d.c. volts.
Current	. . . 0.6	. . . amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	. . .	12.0 μ mf.
Each X Plate to all other electrodes	. . .	5.0 μ mf.
Each Y Plate to all other electrodes	. . .	5.0 μ mf.
Deflector Plates X1 to X2	. . .	2.3 μ mf.
Deflector Plates Y1 to Y2	. . .	2.3 μ mf.
Screen:		
Fluorescence	. . .	Blue.
Persistence	. . .	Very Short
	(10 μ sec. max. for 1% of initial brightness).	
Focussing Method	. . .	Electrostatic.
Deflecting Method	. . .	Electrostatic.
Overall Length	. . .	425 $\pm$ 9 mm.
Greatest Diameter of Bulb	. . .	136.5 mm.
Minimum Useful Screen Diameter	. . .	114 mm.
Mounting Position	. . .	Any.
Anode Cap	. . .	English BSS448/CT2.
Base	. . .	11 Pin Magnal.

- Pin 1—Heater.
 Pin 2—No connection.
 Pin 3—No connection.
 Pin 4—Anode 2.
 Pin 5—No connection.
 Pin 6—No connection.



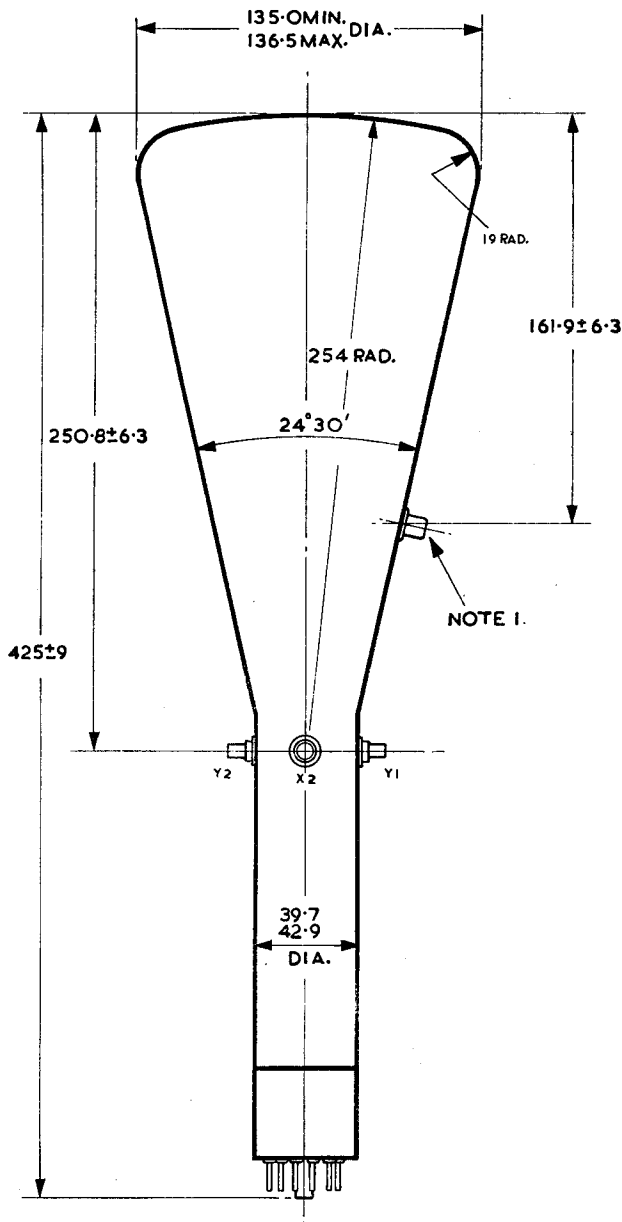
- Pin 7—Anode 1 and Anode 3.
 Pin 8—No connection.
 Pin 9—No connection.
 Pin 10—Modulator.
 Pin 11—Heater and Cathode.
 Cap—Anode 4 P.D.A.
 BSS448/CT1 caps on neck connect to X1, X2, Y1 and Y2.

Typical Operating Conditions :

Anode 1 and 3 (2500 volts max.)	. . .	2000 volts.
Anode 2	. . .	450/570 volts.
Anode 4 (5000 volts max.)	. . .	4000 volts.
Modulator volts for cut-off	. . .	-105 volts max.

Deflection Sensitivity :

		mm./volt.
X Plate	. . .	0.22 to 0.33
Y Plate	. . .	0.22 to 0.33



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by Y1, Y2 and a plane through the tube axis, spigot key and the P.D.A. Cap, may vary by an angular tolerance of 10°. The spigot key is on the same side of the tubes as the P.D.A. Cap.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that the spigot key 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.

DIAMETER 5" NOMINAL

5ED2P**5ED2P**

Oscilloscope Tube

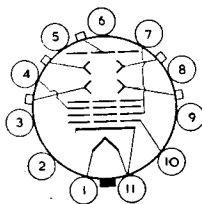
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	12.0 μ f.	
Each X Plate to all other electrodes	5.0 μ f.	
Each Y Plate to all other electrodes	5.0 μ f.	
Deflector Plates X1 to X2	2.3 μ f.	
Deflector Plates Y1 to Y2	2.3 μ f.	
Screen:		
Fluorescence	Blue.	
Afterglow	Yellow.	
Persistence of Afterglow	Long	
(10 sec. min./100 sec. max. for 1% initial brightness).		
Focussing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	425 $\pm$ 9 mm.	
Greatest Diameter of Bulb	136.5 mm.	
Minimum Useful Screen Diameter	114 mm.	
Mounting Position	Any.	
Anode Cap	English BSS448/CT2.	
Base	11 Pin Magnal.	

Pin 1—Heater.
 Pin 2—No connection.
 Pin 3—No connection.
 Pin 4—Anode 2.
 Pin 5—No connection.
 Pin 6—No connection.



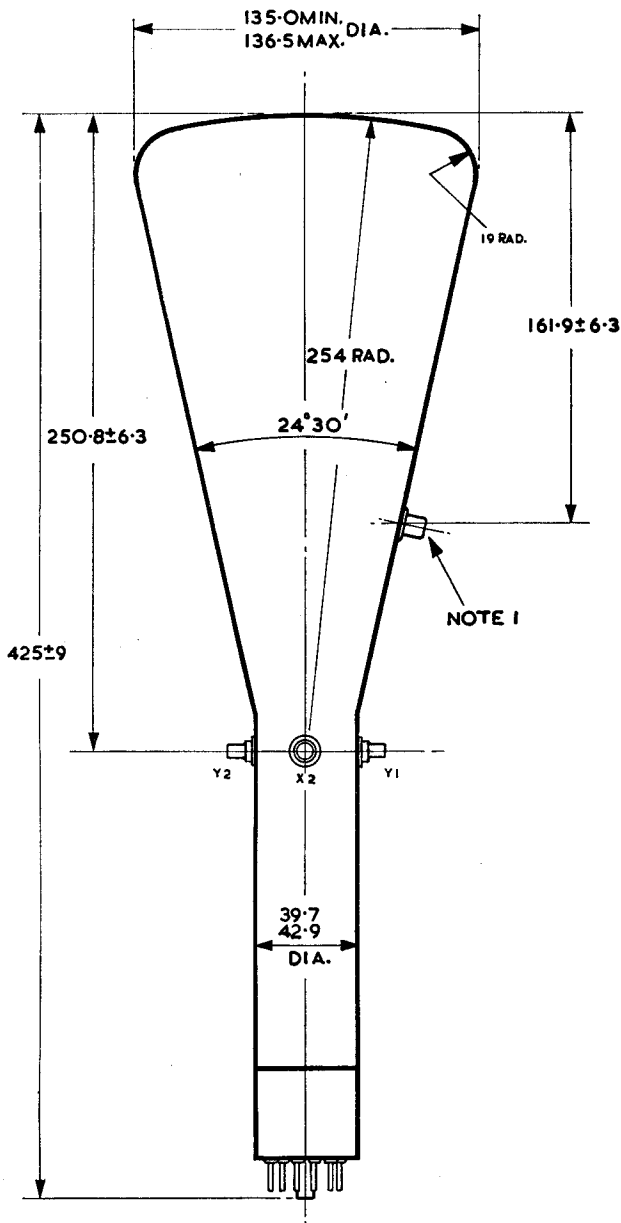
Pin 7—Anode 1 and Anode 3.
 Pin 8—No connection.
 Pin 9—No connection.
 Pin 10—Modulator.
 Pin 11—Heater and Cathode.
 Cap—Anode 4 P.D.A.
 BSS448/CT1 caps on neck connect to X1, X2, Y1 and Y2.

Typical Operating Conditions :

Anode 1 and 3 (2500 volts max.)	2000 volts.
Anode 2	450/570 volts.
Anode 4 (5000 volts max.)	4000 volts.
Modulator volts for cut-off	-105 volts max.

Deflection Sensitivity :

	mm./volt.
X Plate	0.22 to 0.33.
Y Plate	0.22 to 0.33.



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by Y1, Y2 and a plane through the tube axis, spigot key and the P.D.A. Cap, may vary by an angular tolerance of 10°. The spigot key is on the same side of the tubes as the P.D.A. Cap.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that the spigot key 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.

DIAMETER 5" NOMINAL

5EG2P**5EG2P**

Oscilloscope Tube

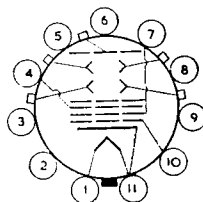
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA

GENERAL:

Heater: Voltage	. . . 6.3	. . . a.c. or d.c. volts.
Current	. . . 0.6	. . . amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	. . .	12.0 μ f.
Each X Plate to all other electrodes	. . .	5.0 μ f.
Each Y Plate to all other electrodes	. . .	5.0 μ f.
Deflector Plates XI to X2	. . .	2.3 μ f.
Deflector Plates Y1 to Y2	. . .	2.3 μ f.
Screen:		
Fluorescence	. . .	Green.
Persistence	. . .	Short
(10 m. sec. min./100m. sec. max. for 1% initial brightness).		
Focussing Method	. . .	Electrostatic.
Deflecting Method	. . .	Electrostatic.
Overall Length	. . .	425 $\pm$ 9 mm.
Greatest Diameter of Bulb	. . .	136.5 mm.
Minimum Useful Screen Diameter	. . .	114 mm.
Mounting Position	. . .	Any.
Anode Cap	. . .	English BSS448/CT2.
Base	. . .	11 Pin Maginal.

- Pin 1—Heater.
 Pin 2—No connection.
 Pin 3—No connection.
 Pin 4—Anode 2.
 Pin 5—No connection.
 Pin 6—No connection.



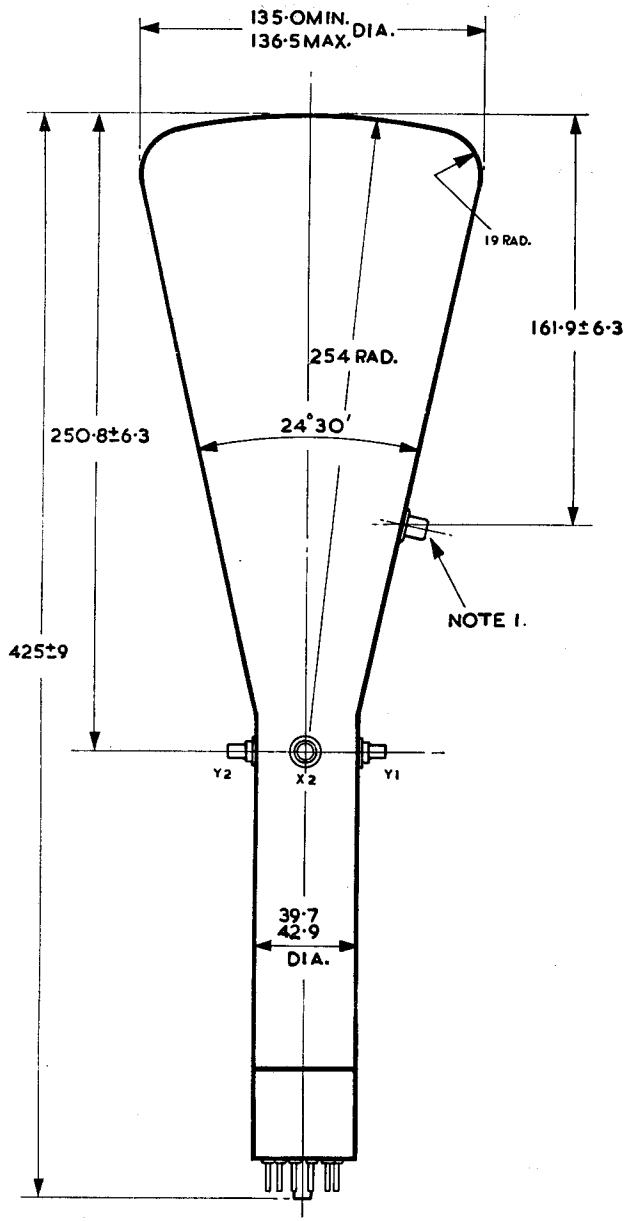
- Pin 7—Anode 1 and Anode 3.
 Pin 8—No connection.
 Pin 9—No connection.
 Pin 10—Modulator.
 Pin 11—Heater and Cathode.
 Cap—Anode 4 P.D.A.
 BSS448/CT1 caps on neck connect to X1, X2, Y1 and Y2.

Typical Operating Conditions:

Anode 1 and 3 (2500 volts max.)	. . .	2000 volts.
Anode 2	. . .	450/570 volts.
Anode 4 (5000 volts max.)	. . .	4000 volts.
Modulator volts for cut-off	. . .	-105 volts max.

Deflection Sensitivity:

		mm./volt.
X Plate	. . .	0.22 to 0.33.
Y Plate	. . .	0.22 to 0.33.



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by Y1, Y2 and a plane through the tube axis, spigot key and the P.D.A. Cap, may vary by an angular tolerance of 10°. The spigot key is on the same side of the tubes as the P.D.A. Cap.
- Note 2.** The angle between the trace produced by X1 and X2 and the trace produced by Y1 and Y2 is 90° $\pm$ 3°.
- Note 3.** The undeflected focused spot will fall within a circle having a 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that the spigot key 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.

5E02P**5E02P****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA**GENERAL:**

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	12.0 μ mf.	
Each X Plate to all other electrodes	5.0 μ mf.	
Each Y Plate to all other electrodes	5.0 μ mf.	
Deflector Plates X1 to X2	2.3 μ mf.	
Deflector Plates Y1 to Y2	2.3 μ mf.	
Screen:		
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long	
(10 sec. min./100 sec. max. for 1% initial brightness).		
Focussing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	425 $\pm$ 9 mm.	
Greatest Diameter of Bulb	136.5 mm.	
Minimum Useful Screen Diameter	114 mm.	
Mounting Position	Any.	
Anode Cap	English BSS448/CT2.	
Base	11 Pin Magnal.	

Pin 1—Heater.

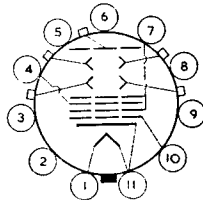
Pin 2—No connection.

Pin 3—No connection.

Pin 4—Anode 2.

Pin 5—No connection.

Pin 6—No connection.



Pin 7—Anode 1 and Anode 3.

Pin 8—No connection.

Pin 9—No connection.

Pin 10—Modulator.

Pin 11—Heater and Cathode.

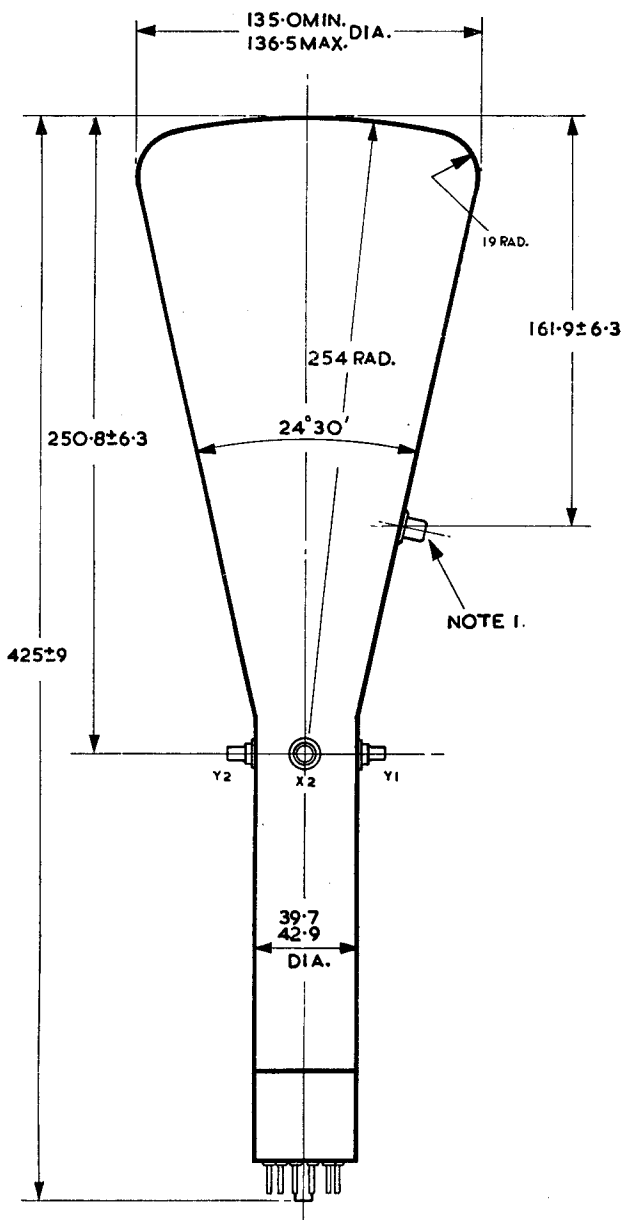
Cap—Anode 4 P.D.A. BSS448/CT1 caps on neck connect to X1, X2, Y1 and Y2.

Typical Operating Conditions :

Anode 1 and 3 (2500 volts max.)	2000 volts.
Anode 2	450/570 volts.
Anode 4 (5000 volts max.)	4000 volts.
Modulator volts for cut-off	-105 volts max.

Deflection Sensitivity :

	mm./volt.
X Plate	0.22 to 0.33.
Y Plate	0.22 to 0.33.



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by Y1, Y2 and a plane through the tube axis, spigot key and the P.D.A. Cap, may vary by an angular tolerance of 10° . The spigot key is on the same side of the tubes as the P.D.A. Cap.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that the spigot key 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.

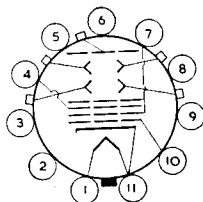
5EY2P**5EY2P****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION.

DATA**GENERAL :**

Heater: Voltage	. . . 6.3	. . . a.c. or d.c. volts.
Current	. . . 0.6	. . . amp.
Direct Inter-electrode Capacitances:		
Modulator to all other electrodes	. . .	12.0 μ f.
Each X Plate to all other electrodes	. . .	5.0 μ f.
Each Y Plate to all other electrodes	. . .	5.0 μ f.
Deflector Plates X1 to X2	. . .	2.3 μ f.
Deflector Plates Y1 to Y2	. . .	2.3 μ f.
Screen:		
Fluorescence	. . .	Yellow.
Afterglow	. . .	Yellow.
Persistence of Afterglow	. . .	Long
(1 sec. min/10 sec. max. for 1% initial brightness).		
Focussing Method	. . .	Electrostatic.
Deflecting Method	. . .	Electrostatic.
Overall Length	. . .	425 $\pm$ 9 mm.
Greatest Diameter of Bulb	. . .	136.5 mm.
Minimum Useful Screen Diameter	. . .	114 mm.
Mounting Position	. . .	Any.
Anode Cap	. . .	English BSS448/CT2.
Base	. . .	11 Pin Magnal.

Pin 1—Heater.
 Pin 2—No connection.
 Pin 3—No connection.
 Pin 4—Anode 2.
 Pin 5—No connection.
 Pin 6—No connection.



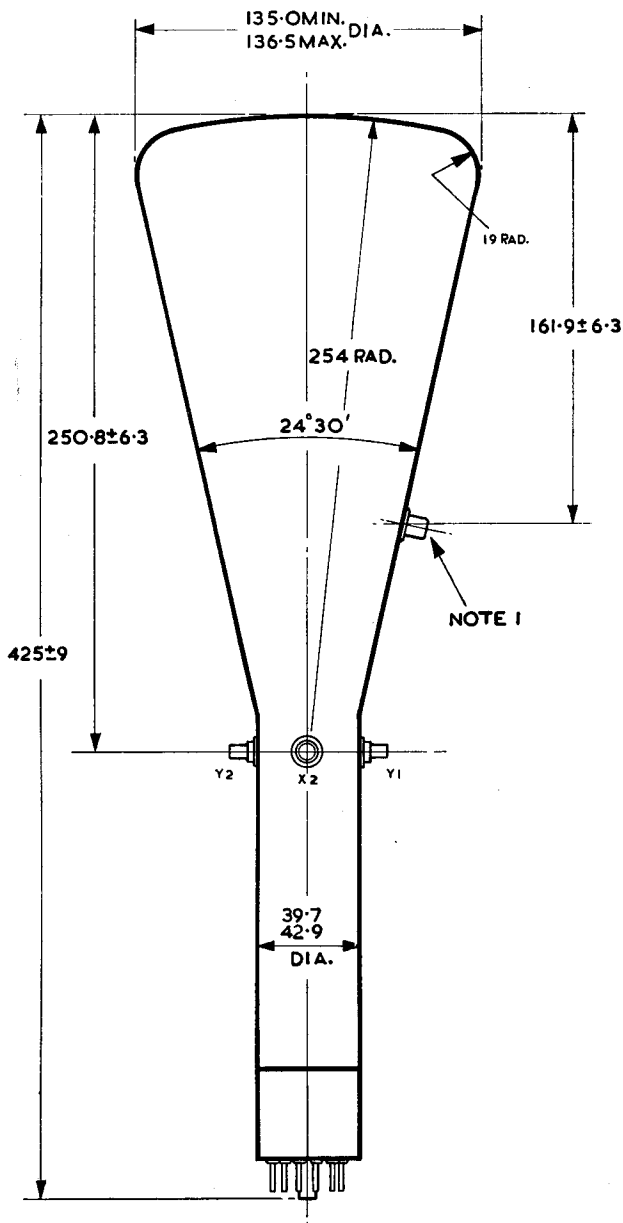
Pin 7—Anode 1 and Anode 3.
 Pin 8—No connection.
 Pin 9—No connection.
 Pin 10—Modulator.
 Pin 11—Heater and Cathode.
 Cap—Anode 4 P.D.A.
 BSS448/CT1 caps on neck connect to X1, X2, Y1 and Y2.

Typical Operating Conditions :

Anode 1 and 3 (2500 volts max.)	. . .	2000 volts.
Anode 2	. . .	450/570 volts.
Anode 4 (5000 volts max.)	. . .	4000 volts.
Modulator volts for cut-off	. . .	-105 volts max.

Deflection Sensitivity :

		mm./volt.
X Plate	. . .	0.22 to 0.33.
Y Plate	. . .	0.22 to 0.33.



ALL SIZES IN MILLIMETRES.

- Note 1.** The angle between the trace produced by Y1, Y2 and a plane through the tube axis, spigot key and the P.D.A. Cap, may vary by an angular tolerance of 10°. The spigot key is on the same side of the tubes as the P.D.A. Cap.
- 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 7 m.m. radius concentric with the centre of the tube face.
- Note 4.** When viewing the screen with the tube positioned such that the spigot key 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.

DIAMETER 5" NOMINAL

5LO1A**Radar Tube**

ELECTROSTATIC FOCUS. MAGNETIC DEFLECTION

DATA

GENERAL:

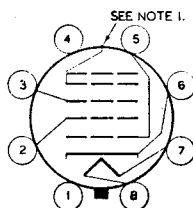
Heater : Voltage	4.0	ac or dc volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances (Approx.)		
Modulator to All Other Electrodes		15 μ f.
Anode 1 to All Other Electrodes		15 μ f.
Cathode to All Other Electrodes		14 μ f.
Screen :		Aluminium Backed.
Fluorescence		Orange.
Afterglow		Orange.
Persistence of Afterglow		Long.
Focusing Method		Electrostatic.
Deflection Method		Magnetic.
Overall Length		315 mm. $\pm$ 6 mm.
Greatest Diameter of Bulb		127.5 mm.
Minimum Useful Screen Diameter		108 mm.
Mounting Position		Any.
Anode Cap		Recessed Small Ball.
Base		International Octal.

Pin 1—No connection.

Pin 2—Anode 1.

Pin 3—Anode 2.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—Cathode.

Pin 7—Heater.

Pin 8—Heater.

Cap—Final Anode.

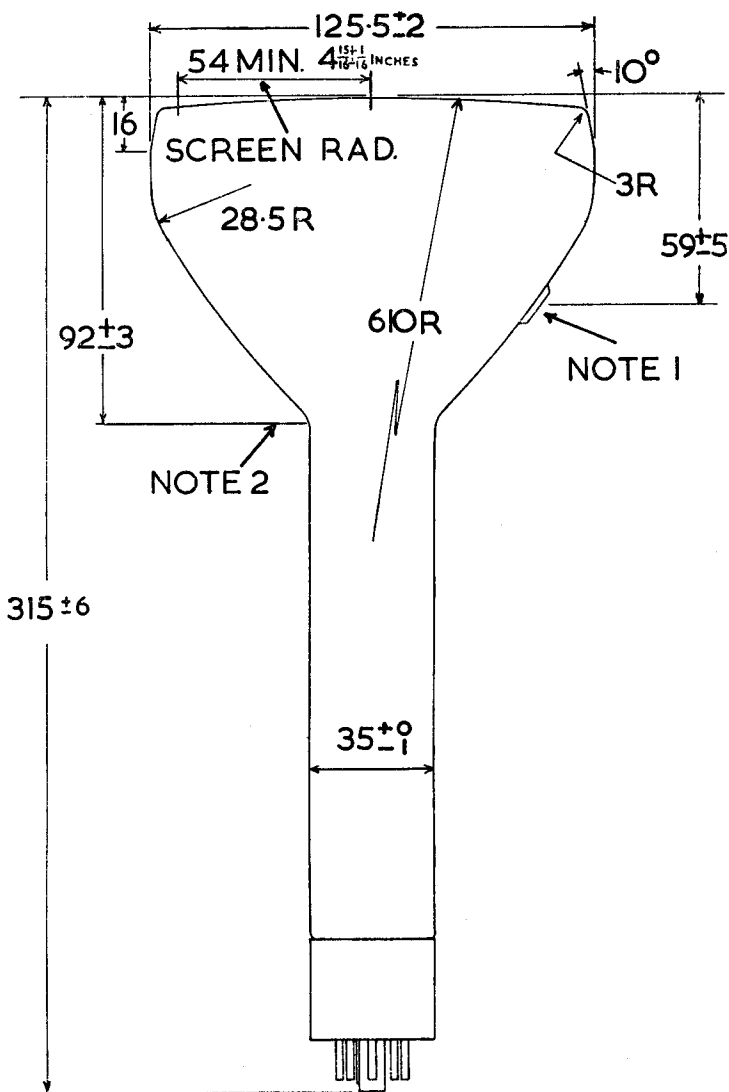
Maximum Ratings

Final Anode Voltage	9000 volts.
Anode 1 Voltage—See Note 3	1450 volts.
Modulator Voltage :	
Negative bias value	100 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltage :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operation

Final Anode Voltage	7000 volts.
Anode 2 Voltage	1000 volts $\pm$ 100 volts.
Anode 1 Voltage	1250 volts.
Modulator Voltage for cut-off	-45 to -80 volts.
Spot Position—See Note 4	

Note 3. Anode 1 must always be at least 50v positive to Anode 2.**Note 4.** The centre of the undeflected focused spot will fall within a circle having 9 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as the spigot key.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

DIAMETER 5" NOMINAL

5TD3**Radar Tube**

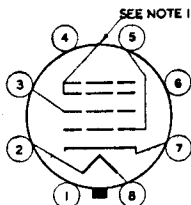
MAGNETIC FOCUS. MAGNETIC DEFLECTION

DATA

GENERAL :

Heater : Voltage	6.3	a.c. or d.c. volts
Current	0.6	amp.
Direct Inter-electrode Capacitances (Approx.)		
Modulator to All Other Electrodes		10.5 μ f.
Anode 1 to All Other Electrodes		6 μ f.
Cathode to All Other Electrodes		9 μ f.
Screen :		
Fluorescence		Blue.
Afterglow		Yellow.
Persistence of Afterglow		Long.
Focusing Method		Magnetic.
Deflection Method		Magnetic.
Deflection Angle (Approx.)		53°
Overall Length		280 $\pm$ 6 mm.
Greatest Diameter of Bulb		125.5 $\pm$ 2 mm.
Minimum Useful Screen Diameter		108 mm.
Mounting Position		Any.
Anode Cap		Recessed Small Ball.
Base		International Octal.

- Pin 1—No connection.
 Pin 2—Heater.
 Pin 3—Anode 1.
 Pin 4—No connection.



- Pin 5—Modulator.
 Pin 6—No connection.
 Pin 7—Cathode.
 Pin 8—Heater.
 Cap—Final Anode.

Maximum Ratings :

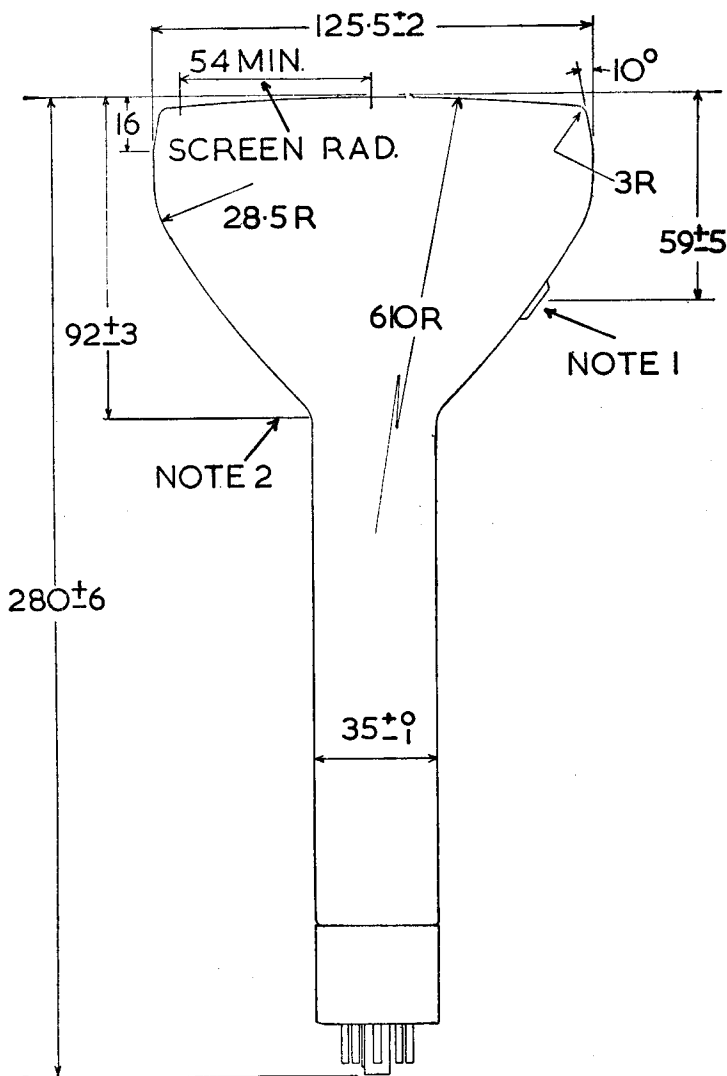
Final Anode Voltage	800 max. volts.
Anode 1 Voltage	700 max. volts.
Modulator Voltage :	
Negative bias value	125 max. volts.
Positive bias value	0 max. volts.
Peak Heater-Cathode Voltage :	
Heater negative with respect to cathode	125 max. volts.
Heater positive with respect to cathode	125 max. volts.

Typical Operation :

Anode Voltage	4000	7000 volts.
Anode 1 Voltage	250	250 volts.
Modulator Voltage for cut-off	-25 to -70	-25 to -70 volts.
Focusing-Coil current—See Note 3	420	520 A.T.
Spot Position	See Note 4	

Note 3. Focusing Coil, positioned with centre line of air gap approximately 70 mm. from reference line (see Outline Drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 9 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES

Note 1. The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

DIAMETER 5" NOMINAL

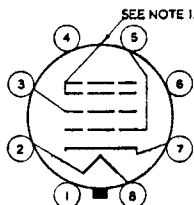
5T03A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

DATA**GENERAL:**

Heater : Voltage	6.3	a.c. or d.c. volts
Current	0.6	amp.
Direct Inter-electrode Capacitances (Approx.)		
Modulator to All Other Electrodes	10.5 $\mu\text{f.}$	
Anode 1 to All Other Electrodes	6 $\mu\text{f.}$	
Cathode to All Other Electrodes	9 $\mu\text{f.}$	
Screen :		
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflection Method	Magnetic.	
Deflection Angle (Approx.)	53°	
Overall Length	280 $\pm$ 6 mm.	
Greatest Diameter of Bulb	125.5 $\pm$ 2 mm.	
Minimum Useful Screen Diameter	108 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	International Octal.	

- Pin 1—No connection.
 Pin 2—Heater.
 Pin 3—Anode 1.
 Pin 4—No connection.



- Pin 5—Modulator.
 Pin 6—No connection.
 Pin 7—Cathode.
 Pin 8—Heater.
 Cap—Final Anode.

Maximum Ratings :

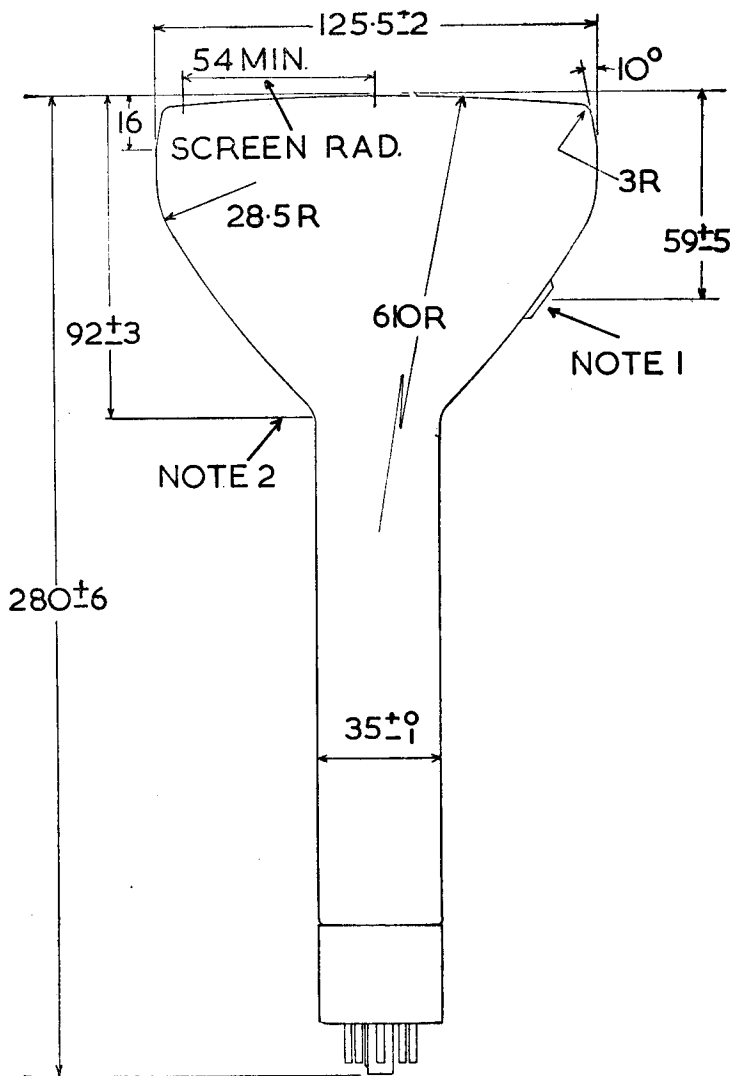
Final Anode Voltage	8000 max. volts.
Anode 1 Voltage	700 max. volts.
Modulator Voltage :	
Negative bias value	125 max. volts.
Positive bias value	0 max. volts.
Peak Heater-Cathode Voltage :	
Heater negative with respect to cathode	125 max. volts.
Heater positive with respect to cathode	125 max. volts.

Typical Operation :

Anode Voltage	4000	7000 volts.
Anode 1 Voltage	250	250 volts.
Modulator Voltage for cut-off	-25 to -70	-25 to -70 volts.
Focusing-Coil current—See Note 3	420	520 A.T.
Spot Position	See Note 4	

Note 3. Focusing Coil, positioned with centre line of air gap approximately 70 mm. from reference line (see Outline Drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 9 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES

Note 1. The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

DIAMETER 5" NOMINAL

5TW3A**Television Monitor Tube**

MAGNETIC FOCUS.

MAGNETIC DEFLECTION

DATA**GENERAL :**

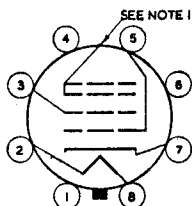
Heater : Voltage	6.3	a.c. or d.c. volts
Current	0.6	amp.
Direct Inter-electrode Capacitances (Approx.)		
Modulator to All Other Electrodes		10.5 μ f.
Anode 1 to All Other Electrodes		6 μ f.
Cathode to All Other Electrodes		9 μ f.
Screen :		
Fluorescence		White.
Persistence of Afterglow		Short.
Focusing Method		Magnetic.
Deflection Method		Magnetic.
Deflection Angle (Approx.)		53°
Overall Length		280 $\pm$ 6 mm.
Greatest Diameter of Bulb		125.5 $\pm$ 2 mm.
Minimum Useful Screen Diameter		108 mm.
Mounting Position		Any.
Anode Cap		Recessed Small Ball.
Base		International Octal.

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Anode 1.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—Cathode.

Pin 7—No connection.

Pin 8—Heater.

Cap—Final Anode.

Maximum Ratings :

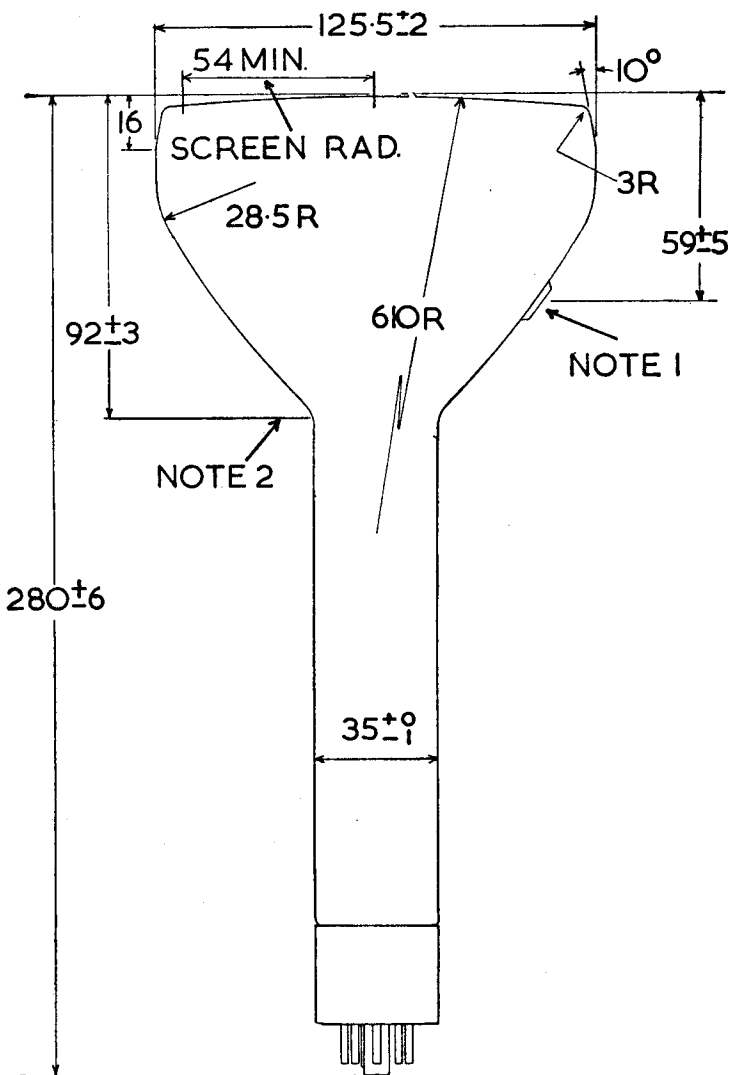
Final Anode Voltage	8000 max. volts.
Anode 1 Voltage	700 max. volts.
Modulator Voltage :	
Negative bias value	125 max. volts.
Positive bias value	0 max. volts.
Peak Heater-Cathode Voltage :	
Heater negative with respect to cathode	125 max. volts.
Heater positive with respect to cathode	125 max. volts.

Typical Operation :

Anode Voltage	4000	7000 volts.
Anode 1 Voltage	250	250 volts.
Modulator Voltage for cut-off	-25 to -70	-25 to -70 volts.
Focusing-Coil current—See Note 3	420	520 A.T.
Spot Position	See Note 4	

Note 3. Focusing Coil, positioned with centre line of air gap approximately 70 mm. from reference line (see Outline Drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 9 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES

- Note 1.** The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.
- Note 2.** Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

6EB4**6EB4**

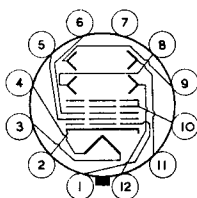
Oscilloscope Tube

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 μ mf.
Each X Plate to all other electrodes		25 μ mf.
Each Y Plate to all other electrodes		25 μ mf.
One X to one Y Deflector Plate		6 μ mf.
Cathode to all other electrodes		15 μ mf.
Screen:		
Fluorescence		Blue.
Persistence		Very Short.
	(10 μ sec. max. for 1% initial brightness).	
Focusing Method		Electrostatic.
Deflecting Method		Electrostatic.
Overall Length		421 $\pm$ 10 mm.
Greatest Diameter of Bulb		160 mm.
Minimum Useful Screen Diameter		130 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.

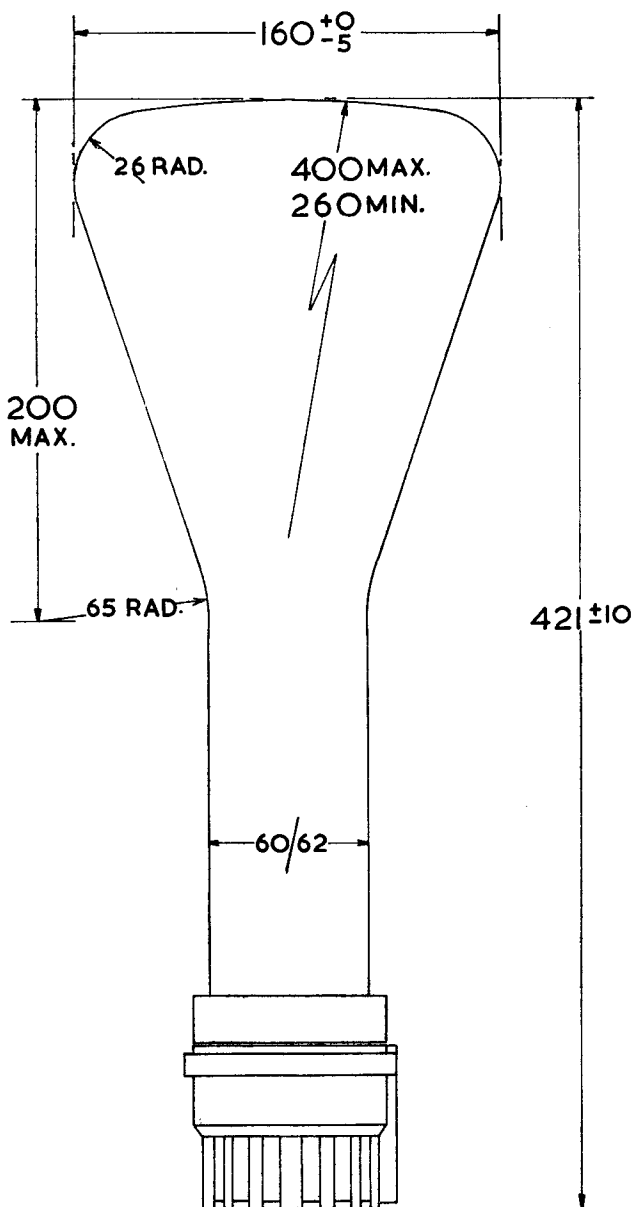
Typical Operating Conditions :

Anode 1	 2000 volts.	2000 volts.
Anode 2	 700 volts.	400 volts.
Anode 3 (5000v. max.)	 4000 volts.	2000 volts.
Modulator volts for cut-off	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	 0.160	0.320
Y Plate	 0.295	0.590

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 10 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.

6EB4F**6EB4F****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 μ mf.

Each X Plate to all other electrodes 25 μ mf.

Each Y Plate to all other electrodes 25 μ mf.

One X to one Y Deflector Plate 6 μ mf.

Cathode to all other electrodes 15 μ mf.

Screen :

Fluorescence Blue.

Persistence Very Short.

(10 μ sec. max. for 1% initial brightness).

Focusing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 421 $\pm$ 10 mm.

Greatest Diameter of Bulb 159 mm.

Minimum Useful Screen Diameter 140 mm.

Mounting Position Any.

Base B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

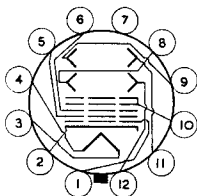
Pin 3—Heater.

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. 400 volts.

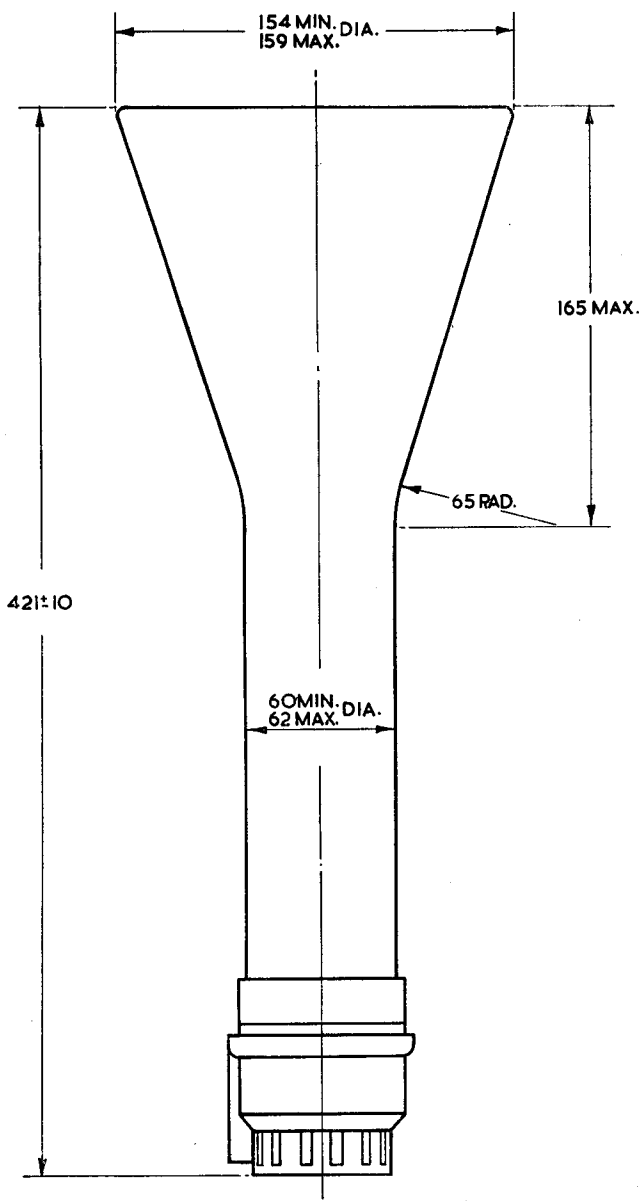
Anode 3 (5000v. max.) 4000 volts. 2000 volts.

Modulator volts for cut-off
-40 to -80 volts. -40 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.145	0.290
Y Plate	0.280	0.560

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 10 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.

6EB5**6EB5**

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 25 μ mf.Each X Plate to all other electrodes 20 μ mf.Each Y Plate to all other electrodes 13 μ mf.One X to one Y Deflector Plate 2.5 μ mf.Cathode to all other electrodes 25 μ mf.

Screen :

Fluorescence Blue.

Persistence Very Short.

(10 μ sec. max. for 1% initial brightness).

Focusing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 421 $\pm$ 10 mm.

Greatest Diameter of Bulb 160 mm.

Minimum Useful Screen Diameter 130 mm.

Mounting Position Any.

Base B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

Pin 3—Heater.

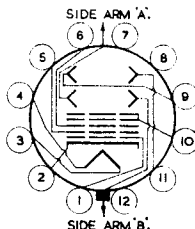
Pin 4—Heater.

Pin 5—Anode 1.

Pin 6—Anode 2.

Pin 7—No connection

Pin 8—No connection.



Pin 9—X2.

Pin 10—Anode 3 and
Internal Conductive
coating.

Pin 11—X1.

Pin 12—No connection

Side Arm 'A'—Y2.

Side Arm 'B'—Y1.

Typical Operating Conditions :

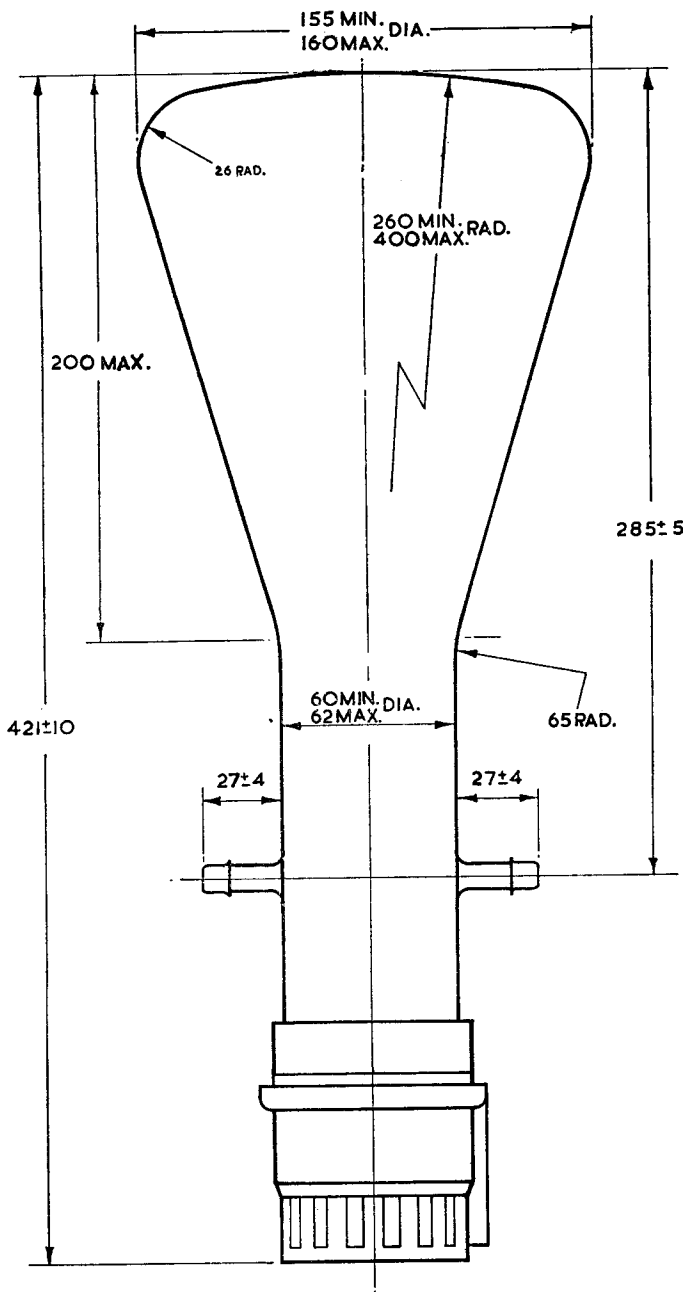
Anode 1	2000 volts.	2000 volts.
Anode 2	700 volts.	400 volts.
Anode 3 (5000v. max.)	4000 volts.	2000 volts.
Modulator volts for cut-off		
	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.	mm/volt.
X Plate	0.160	0.320
Y Plate	0.295	0.590

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 10 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.

DIAMETER 6" NOMINAL

6EB7**6EB7**

Oscilloscope Tube

ELECTROSTATIC FOCUS ELECTROSTATIC DEFLECTION

Suitable for Assymetrical 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 μ mf.	
Each X Plate to all other electrodes	25 μ mf.	
Each Y Plate to all other electrodes	25 μ mf.	
One X to one Y Deflector Plate	2.5 μ mf.	
Cathode to all other electrodes	15 μ mf.	
Screen :		
Fluorescence	Blue.	
Persistence	Very Short.	
	(10 μ sec. max. for 1% initial brightness).	
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	421 $\pm$ 10 mm.	
Greatest Diameter of Bulb	163 mm.	
Minimum Useful Screen Diameter	130 mm.	
Mounting Position	Any.	
Base	B.12.D.	

Pin 1—Modulator.

Pin 2—Cathode.

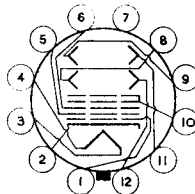
Pin 3—Heater.

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.

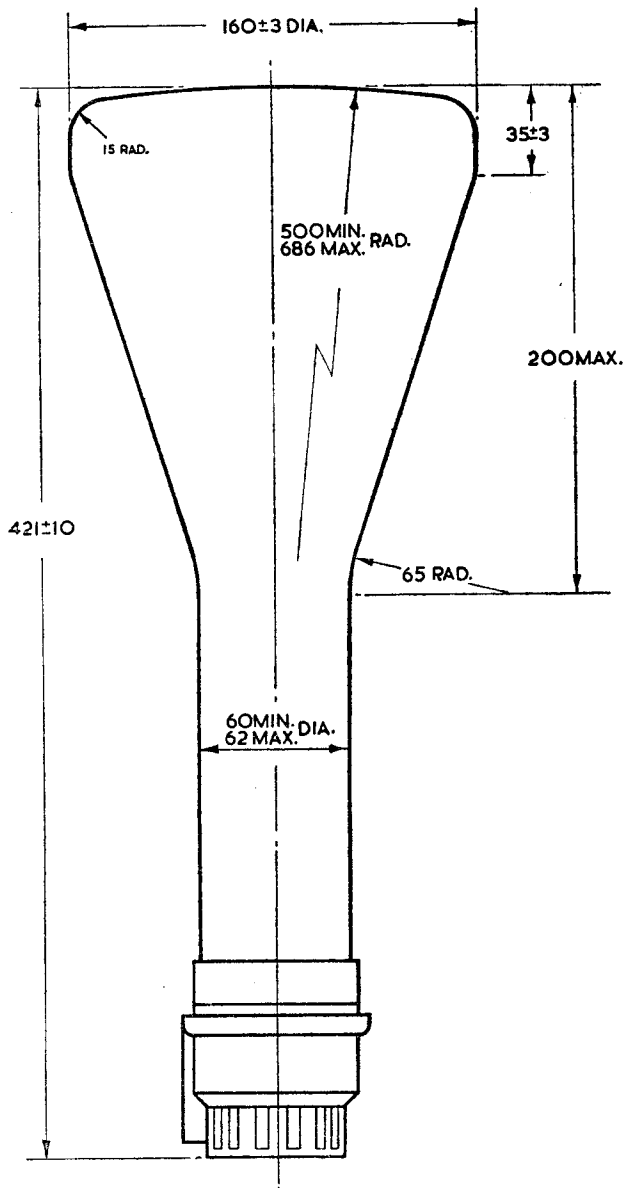
Typical Operating Conditions :

Anode 1	2000 volts.	2000 volts.
Anode 2	800 volts.	530 volts.
Anode 3 (6000v. max.)	5000 volts.	3000 volts.
Modulator volts for cut-off	-45 to -80 volts.	-45 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.130	0.215
Y Plate	0.250	0.415

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 10 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.

6ED4**6ED4**

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 μ f.
Each X Plate to all other electrodes	. . .	25 μ f.
Each Y Plate to all other electrodes	. . .	25 μ f.
One X to one Y Deflector Plate	. . .	6 μ f.
Cathode to all other electrodes	. . .	15 μ f.
Screen :		
Fluorescence	. . .	Blue.
Afterglow	. . .	Yellow.
Persistence of Afterglow	. . .	Long.
	(10 sec. min./100 sec. max. for 1% initial brightness).	
Focusing Method	. . .	Electrostatic.
Deflecting Method	. . .	Electrostatic.
Overall Length	. . .	421 $\pm$ 10 mm.
Greatest Diameter of Bulb	. . .	160 mm.
Minimum Useful Screen Diameter	. . .	130 mm.
Mounting Position	. . .	Any.
Base	. . .	B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

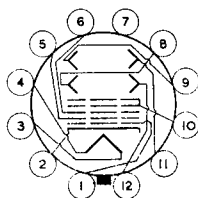
Pin 3—Heater.

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 :

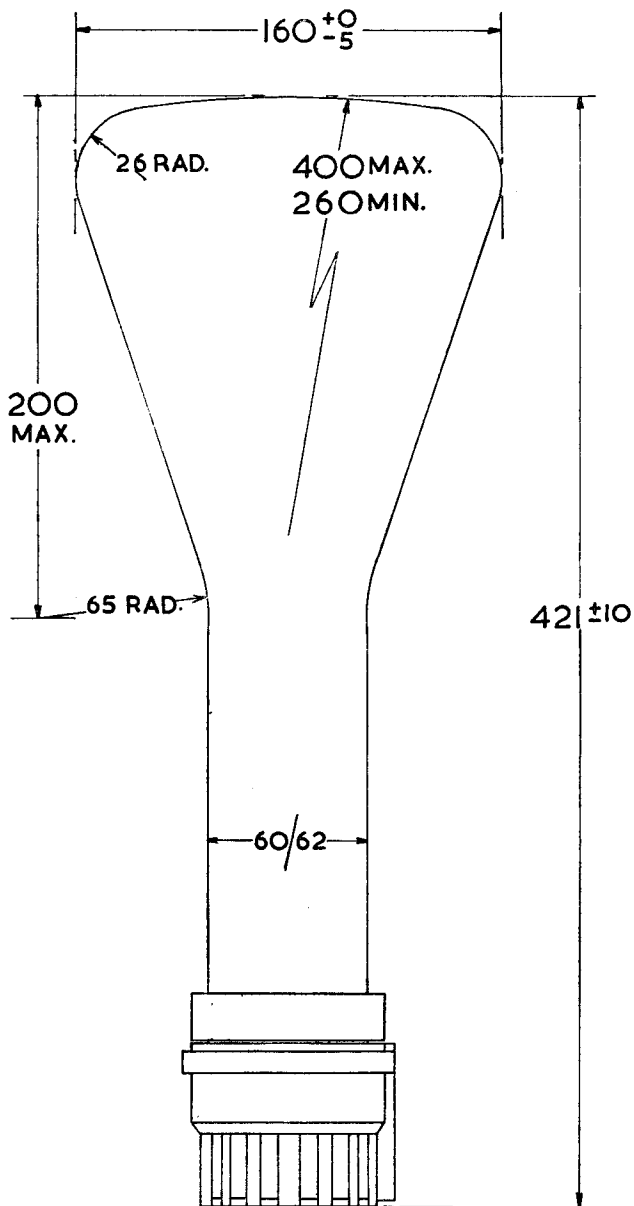
Anode 1	. . . 2000 volts.	2000 volts.
Anode 2	. . . 700 volts.	400 volts.
Anode 3 (5000v. max.)	. . . 4000 volts.	2000 volts.
Modulator volts for cut-off	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.	mm/volt.
X Plate	. . . 0.160	0.320
Y Plate	. . . 0.295	0.590

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 10 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.

Oscilloscope Tube

ELECTROSTATIC FOCUS ELECTROSTATIC DEFLECTION

Suitable for Assymetrical 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 μ f.Each X Plate to all other electrodes 25 μ f.Each Y Plate to all other electrodes 25 μ f.One X to one Y Deflector Plate 2.5 μ f.Cathode to all other electrodes 15 μ f.

Screen :

Fluorescence Blue.

Afterglow Yellow.

Persistence of Afterglow Long.

(10m sec. min./100m sec. max. for 1% initial brightness).

Focusing Method Electrostatic.

Deflecting Method Electrostatic.

Overall Length 421 $\pm$ 10 mm.

Greatest Diameter of Bulb 163 mm.

Minimum Useful Screen Diameter 130 mm.

Mounting Position Any.

Base B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

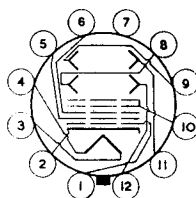
Pin 3—Heater.

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.

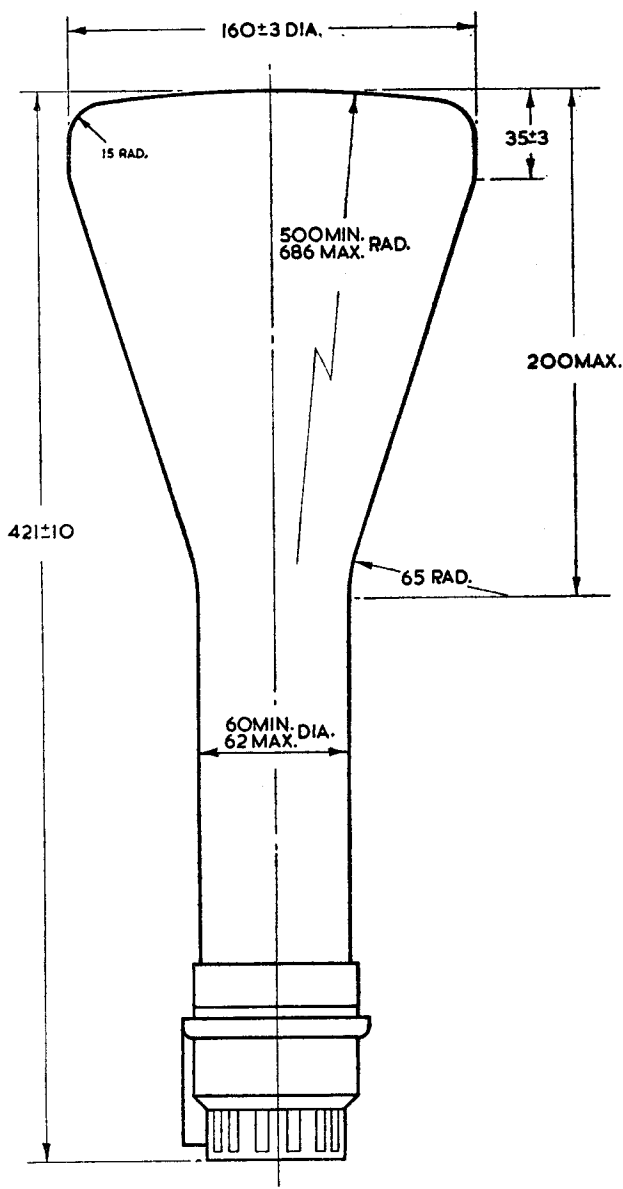
Typical Operating Conditions :

Anode 1	2000 volts.	2000 volts.
Anode 2	800 volts.	530 volts.
Anode 3 (6000v. max.)	5000 volts.	3000 volts.
Modulator volts for cut-off	-45 to -80 volts.	-45 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.130	0.215
Y Plate	0.250	0.415

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 10 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.

6EG4**6EG4**

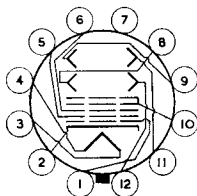
Oscilloscope Tube

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 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
Screen :		
Fluorescence	Green.	
Persistence	Short.	
(10m sec. min./100m sec. max. for 1% initial brightness).		
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	421 $\pm$ 10 mm.	
Greatest Diameter of Bulb	160 mm.	
Minimum Useful Screen Diameter	130 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.

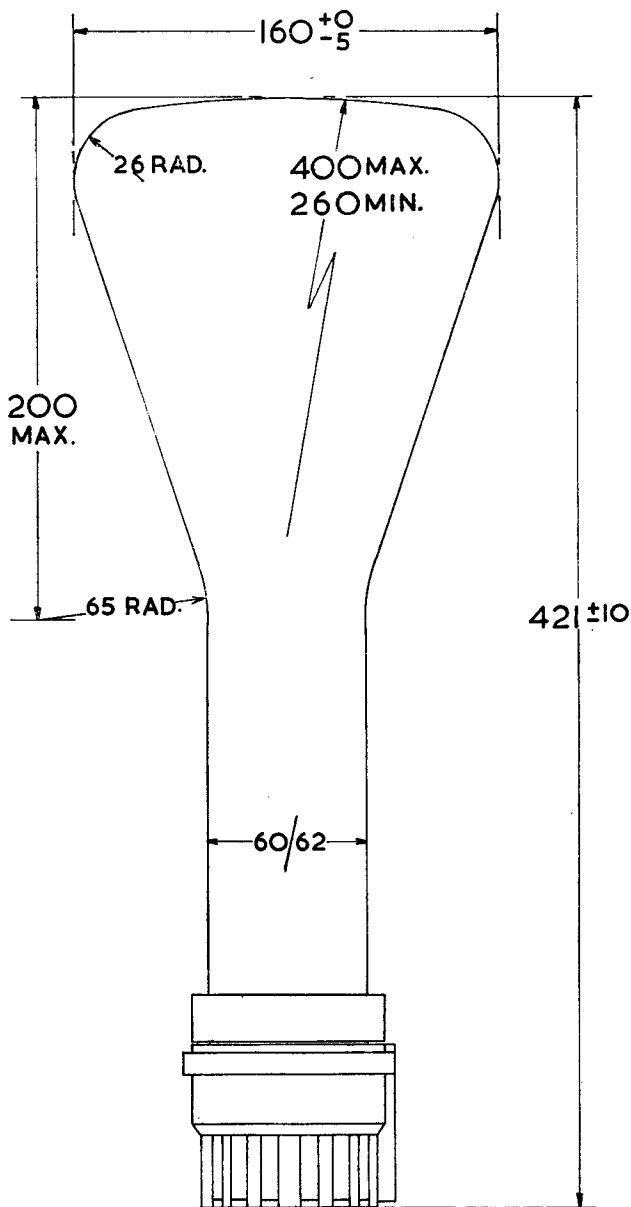
Typical Operating Conditions :

Anode 1	2000 volts.	2000 volts.
Anode 2	700 volts.	400 volts.
Anode 3 (5000v. max.)	4000 volts.	2000 volts.
Modulator volts for cut-off	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.160	0.320
Y Plate	0.295	0.590

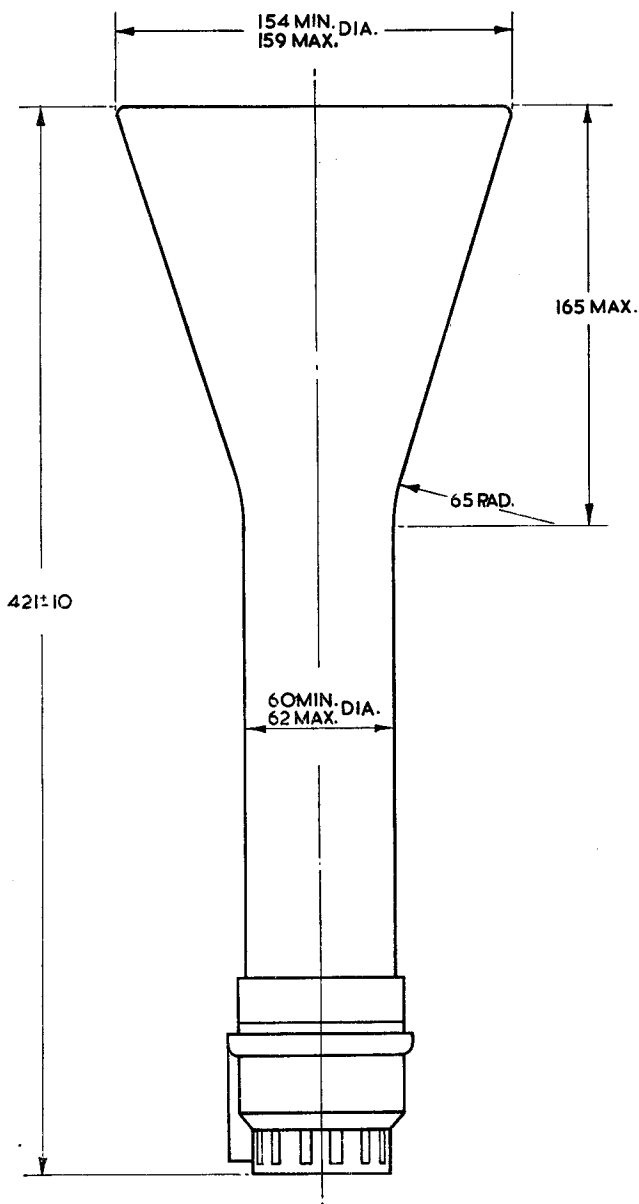
Note 2. The angle between the trace produced by X1 and X2 and the trace produced by Y1 and Y2 is $90^\circ \pm 3^\circ$.

Note 3. The undeflected focused spot will fall within a circle having a 10 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.



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.

6EG5**6EG5**

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 μ f.
Each X Plate to all other electrodes		20 μ f.
Each Y Plate to all other electrodes		13 μ f.
One X to one Y Deflector Plate		2.5 μ f.
Cathode to all other electrodes		25 μ f.
Screen :		
Fluorescence		Green.
Persistence		Short.
(10m sec. min./100m sec. max. for 1% initial brightness).		
Focusing Method		Electrostatic.
Deflecting Method		Electrostatic.
Overall Length		421 $\pm$ 10 mm.
Greatest Diameter of Bulb		160 mm.
Minimum Useful Screen Diameter		130 mm.
Mounting Position		Any.
Base		B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

Pin 3—Heater.

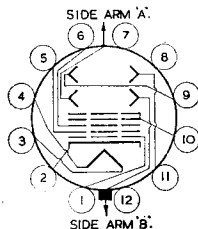
Pin 4—Heater.

Pin 5—Anode 1.

Pin 6—Anode 2.

Pin 7—No connection.

Pin 8—No connection.



Pin 9—X2.

Pin 10—Anode 3 and
Internal Conductive
coating.

Pin 11—X1.

Pin 12—No connection

Side Arm 'A'—Y2.

Side Arm 'B'—Y1.

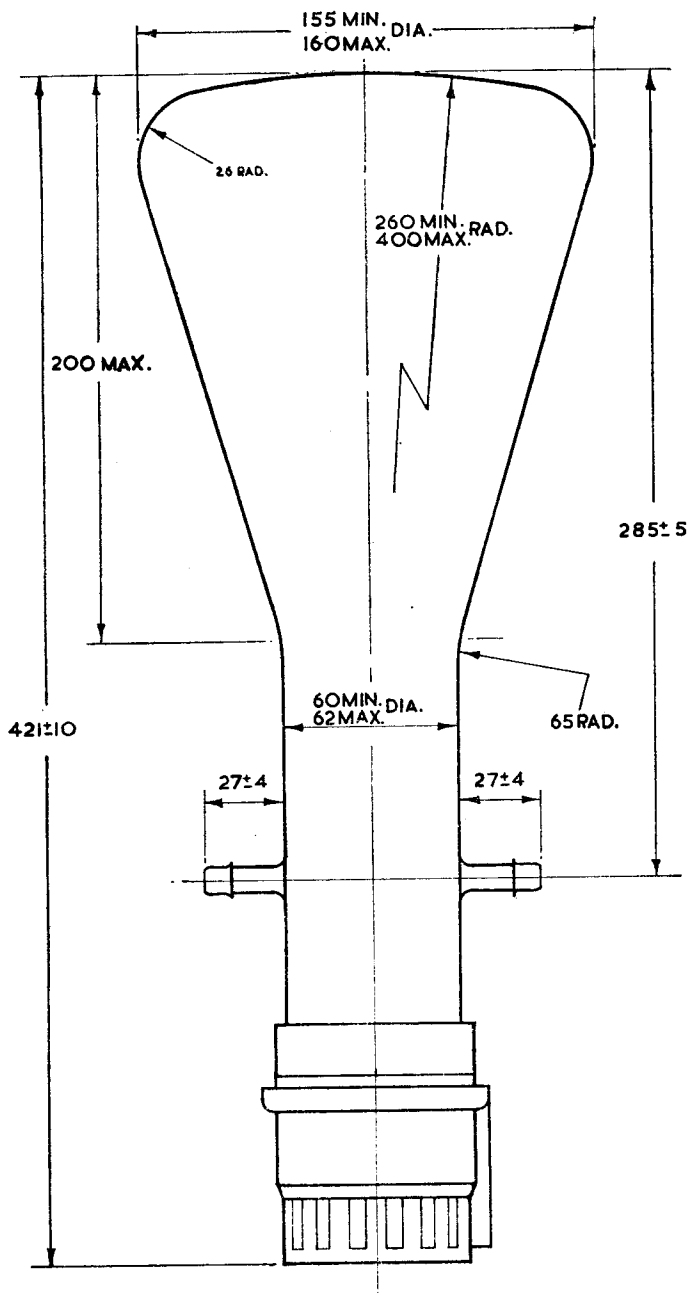
Typical Operating Conditions :

Anode 1	 2000 volts.	2000 volts.
Anode 2	 700 volts.	400 volts.
Anode 3 (5000v. max.)	 4000 volts.	2000 volts.
Modulator volts for cut-off		
	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	 0.160	0.320
Y Plate	 0.295	0.590

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 10 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.

DIAMETER 6" NOMINAL

6EG7**6EG7**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION
Suitable for Asymmetrical Deflection**GENERAL :****DATA**

Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	25 μ mf.	
Each X Plate to all other electrodes	25 μ mf.	
Each Y Plate to all other electrodes	25 μ mf.	
One X to one Y Deflector Plate	2.5 μ mf.	
Cathode to all other electrodes	15 μ mf.	
Screen :		
Fluorescence	Green.	
Persistence	Short.	
(10m sec. min./100m sec. max. for 1% initial brightness).		
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	421 $\pm$ 10 mm.	
Greatest Diameter of Bulb	163 mm.	
Minimum Useful Screen Diameter	130 mm.	
Mounting Position	Any.	
Base	B.12.D.	

Pin 1—Modulator.

Pin 2—Cathode.

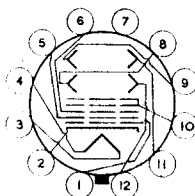
Pin 3—Heater.

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.

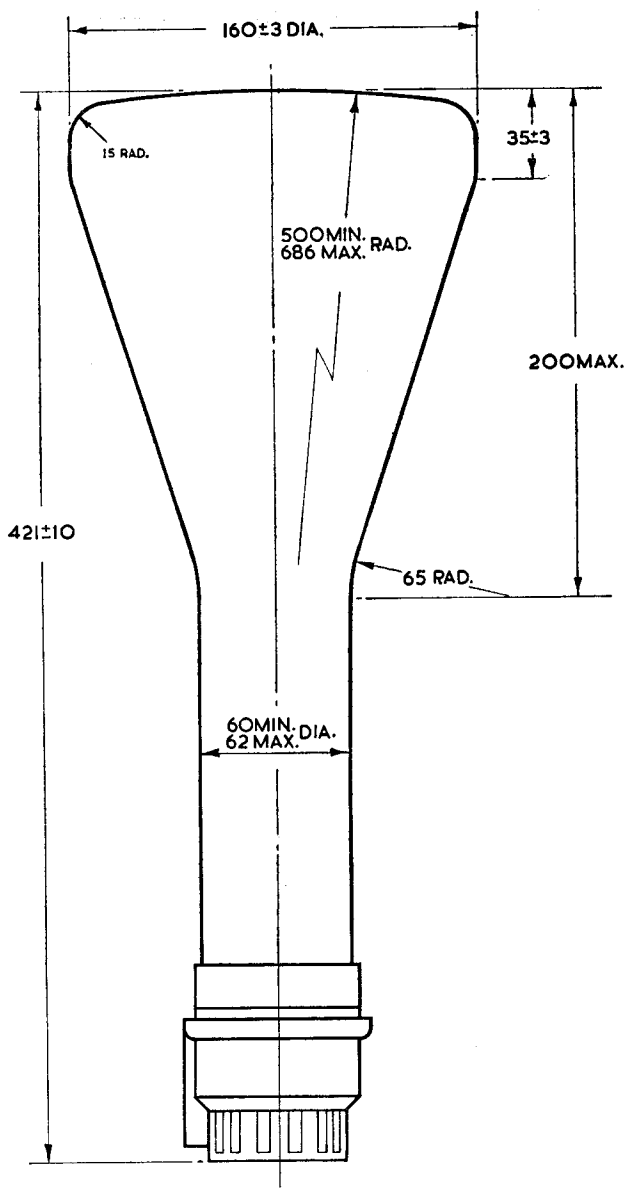
Typical Operating Conditions :

Anode 1	2000 volts.	2000 volts.
Anode 2	800 volts.	530 volts.
Anode 3 (6000v. max.)	5000 volts.	3000 volts.
Modulator volts for cut-off	-45 to -80 volts.	-45 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	0.130	0.215
Y Plate	0.250	0.415

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 10 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.

6E04**6E04**

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

GENERAL :**DATA**

Heater: Voltage	. . . 4.0	. . . a.c. or d.c. volts.
Current	. . . 1.0	. . . amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	. . .	25 μ mf.
Each X Plate to all other electrodes	. . .	25 μ mf.
Each Y Plate to all other electrodes	. . .	25 μ mf.
One X to one Y Deflector Plate	. . .	6 μ mf.
Cathode to all other electrodes	. . .	15 μ mf.
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	. . .	421 $\pm$ 10 mm.
Greatest Diameter of Bulb	. . .	160 mm.
Minimum Useful Screen Diameter	. . .	130 mm.
Mounting Position	. . .	Any.
Base	. . .	B.12.D.

Pin 1—Modulator.

Pin 2—Cathode.

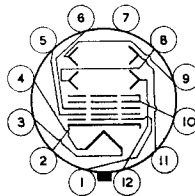
Pin 3—Heater.

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.

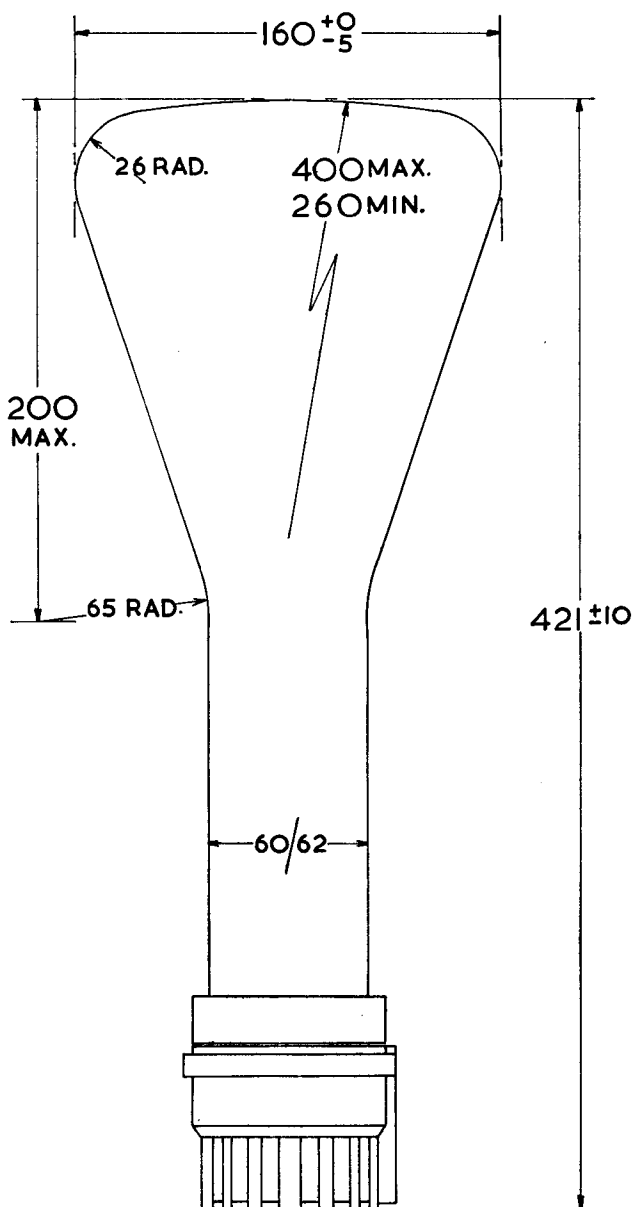
Typical Operating Conditions :

Anode 1	. . . 2000 volts.	2000 volts.
Anode 2	. . . 700 volts.	400 volts.
Anode 3 (5000v. max.)	. . . 4000 volts.	2000 volts.
Modulator volts for cut-off		
	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :	mm/volt.	mm/volt.
X Plate	. . . 0.160	0.320
Y Plate	. . . 0.295	0.590

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 10 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.

DIAMETER 6" NOMINAL

6LY1A

Radar Tube

ELECTROSTATIC FOCUS. MAGNETIC DEFLECTION

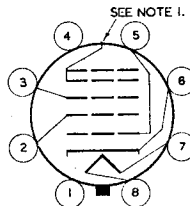
6LY1A

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	15 μ uf.	
Anode 1 to all other electrodes	15 μ uf.	
Cathode to all other electrodes	14 μ uf.	
Screen :	Aluminium Backed.	
Fluorescence	Yellow.	
Afterglow	Yellow.	
Persistence of Afterglow	Long.	
Focusing Method	Electrostatic.	
Deflecting Method	Magnetic.	
Overall Length	390 $\pm$ 10 mm.	
Greatest Diameter of Bulb	163 mm.	
Minimum Useful Screen Diameter	135 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	International Octal.	

- Pin 1—No connection.
Pin 2—Anode 1.
Pin 3—Anode 2.
Pin 4—No connection.



- Pin 5—Modulator.
Pin 6—Cathode.
Pin 7—Heater.
Pin 8—Heater.
Cap—Final Anode.

Maximum Ratings :

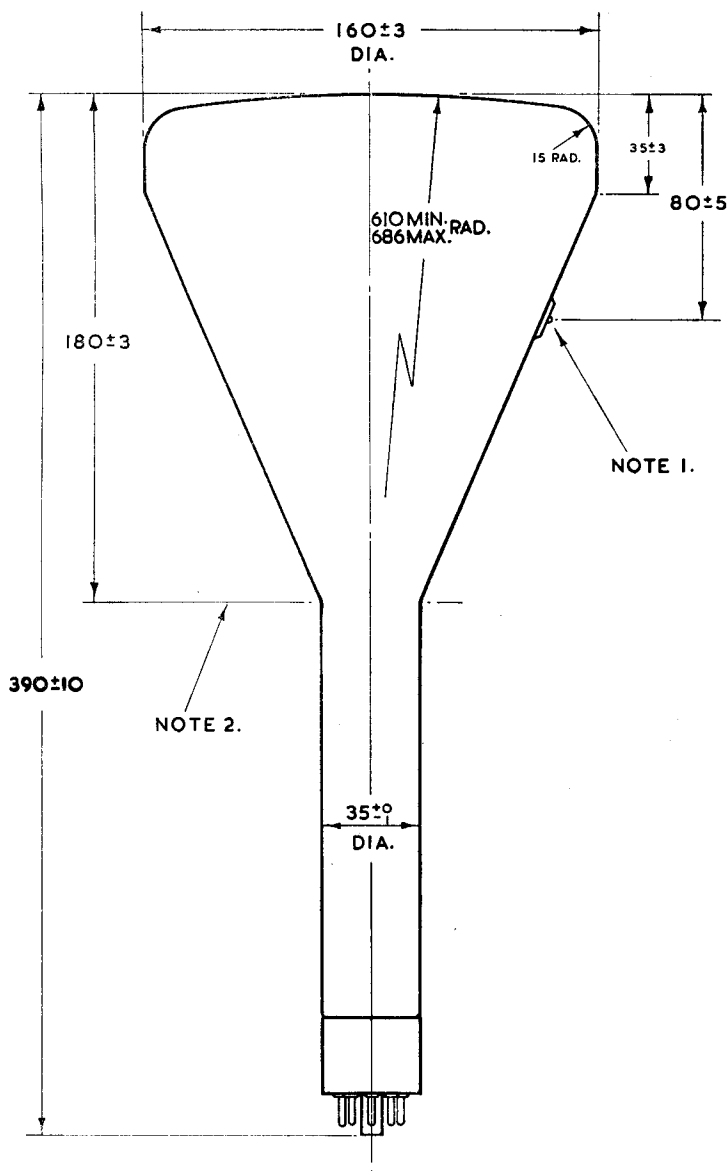
Final Anode Voltage	9000 volts.
Anode 1 Voltage	1650 volts.
Modulator Voltage :	
Negative bias value	130 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions :

Final Anode Voltage	7000 volts.
Anode 2 Voltage	1075 volts. $\pm$ 100 volts.
Anode 1 Voltage—See Note 3	1250 volts.
Modulator Voltage for cut-off	-45 to -100 volts.
Spot Position	See Note 4

Note 3. Anode 1 must always be at least 50 volts positive to Anode 2.

Note 4. The centre of the undeflected focused spot will fall within a circle having a 10 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.

Note 2. Reference line is determined by position where a gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

DIAMETER 6" NOMINAL

6TO3A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

DATA**GENERAL :**

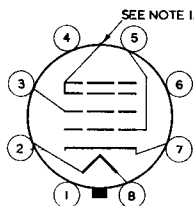
Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	9.0 μ mf.	
Anode 1 to all other electrodes	6.0 μ mf.	
Cathode to all other electrodes	8.0 μ mf.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	369 $\pm$ 7 mm.	
Greatest Diameter of Bulb	163 mm.	
Minimum Useful Screen Diameter	135 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Anode 1.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—No connection.

Pin 7—Cathode.

Pin 8—Heater.

Cap—Final Anode.

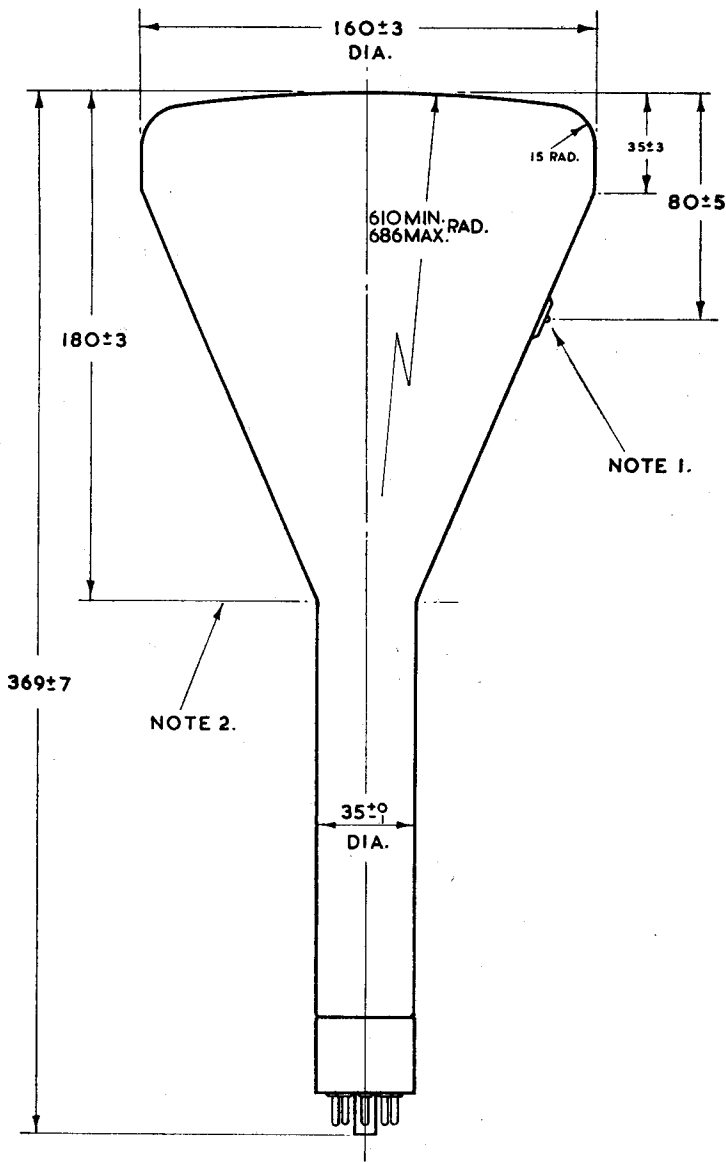
Maximum Ratings :

Final Anode Voltage	10000 volts.
Anode 1 Voltage	500 volts.
Modulator Voltage :	
Negative bias value	125 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions :

Final Anode Voltage	7000 volts.
Anode 1 Voltage	450 volts.
Modulator Voltage for cut-off	-45 to -110 volts.
Focusing-Coil Current—See Note 3	830 A.T.
Spot Position	See Note 4

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 10 mm. radius concentric with the centre of the tube face.



- Note 1.** The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.
- Note 2.** Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.
- Note 3.** Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

DIAMETER 7" NOMINAL

7TD3A

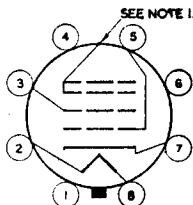
Radar Tube

MAGNETIC FOCUS. MAGNETIC DEFLECTION

GENERAL:

Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes		9.0 μ mf.
Anode 1 to all other electrodes		6.0 μ mf.
Cathode to all other electrodes		8.0 μ mf.
Screen :		Aluminium Backed.
Fluorescence		Blue.
Afterglow		Yellow.
Persistence of Afterglow		Long.
Focusing Method		Magnetic.
Deflecting Method		Magnetic.
Overall Length		337 $\pm$ 10 mm.
Greatest Diameter of Bulb		181 mm.
Minimum Useful Screen Diameter		155 mm.
Mounting Position		Any.
Anode Cap		Recessed Small Ball.
Base		International Octal.

- Pin 1—No connection.
Pin 2—Heater.
Pin 3—Anode 1.
Pin 4—No connection.



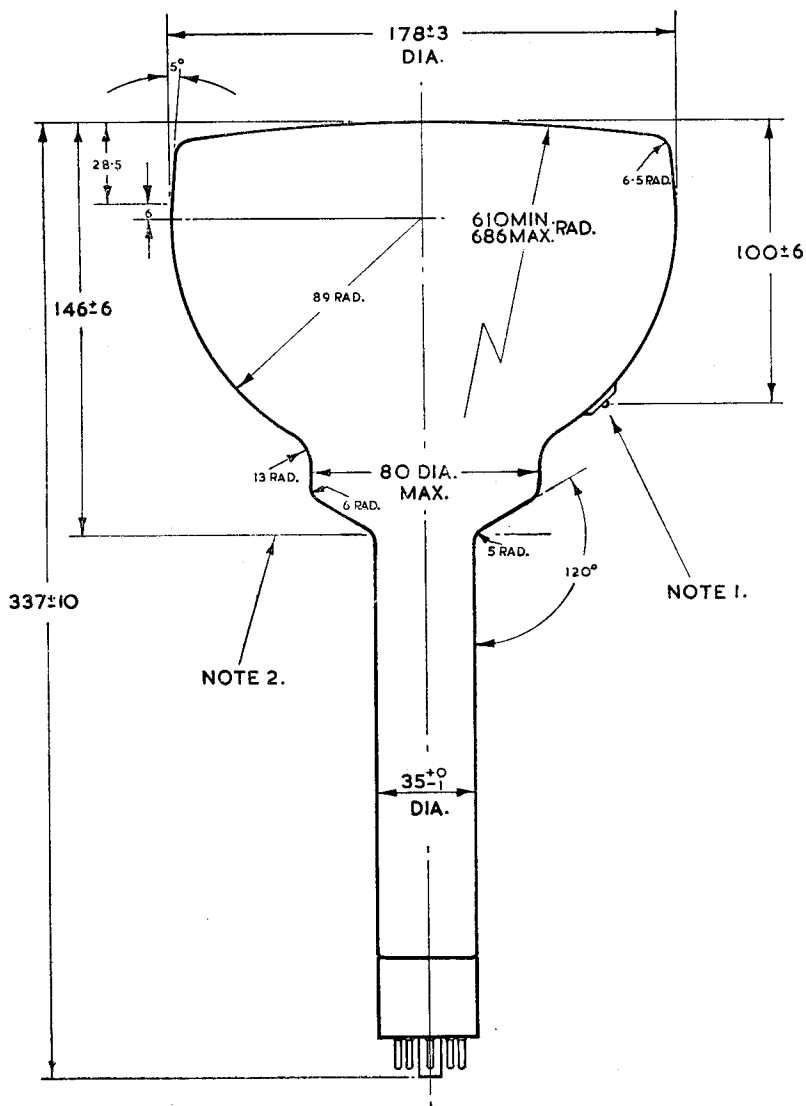
- Pin 5—Modulator.
Pin 6—No connection.
Pin 7—Cathode.
Pin 8—Heater.
Cap—Final Anode.

Maximum Ratings :

Final Anode Voltage	8000 volts.
Anode 1 Voltage	700 volts.
Modulator Voltage :	
Negative bias value	195 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions :

Final Anode Voltage	4000 volts.	7000 volts.
Anode 1 Voltage	250 volts.	250 volts.
Modulator Voltage for cut-off	-25 to -70 volts.	-25 to -70 volts.
Focusing-Coil Current—See Note 3	500 A.T.	625 A.T.
Spot Position	See Note 4	



ALL SIZES IN MILLIMETRES.

Note 1. The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.

Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.

Note 3. Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).

Note 4. The centre of the undeflected unfocused spot will fall within a circle having a 10 mm. radius concentric with the centre of the tube face.

DIAMETER 7" NOMINAL

7T03A**Radar Tube**

MAGNETIC FOCUS. MAGNETIC DEFLECTION

7T03A**GENERAL :****DATA**

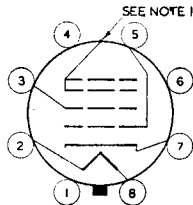
Heater: Voltage	6.3	a.c. or d.c. volts.
Current	0.6	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	9.0 μ f.	
Anode 1 to all other electrodes	6.0 μ f.	
Cathode to all other electrodes	8.0 μ f.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Magnetic.	
Deflecting Method	Magnetic.	
Overall Length	337 $\pm$ 10 mm.	
Greatest Diameter of Bulb	181 mm.	
Minimum Useful Screen Diameter	155 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	International Octal.	

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Anode 1.

Pin 4—No connection.



Pin 5—Modulator.

Pin 6—No connection.

Pin 7—Cathode.

Pin 8—Heater.

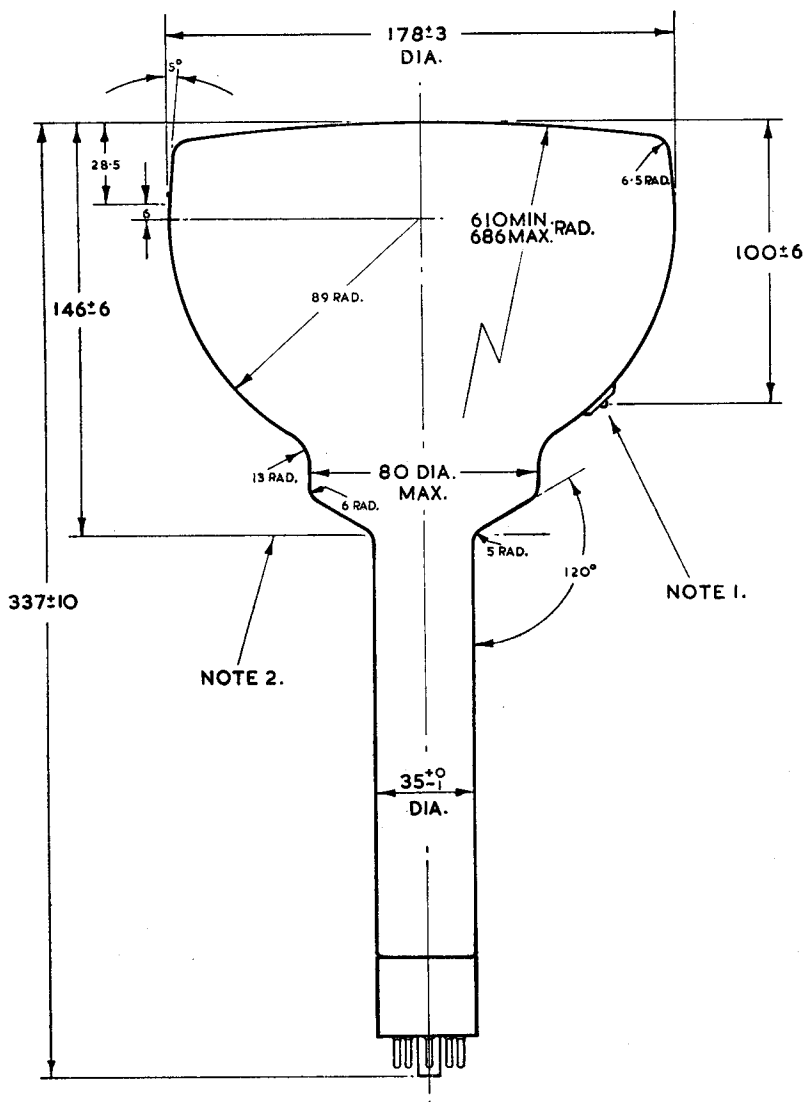
Cap—Final Anode.

Maximum Ratings :

Final Anode Voltage	8000 volts.
Anode 1 Voltage	700 volts.
Modulator Voltage :	
Negative bias value	195 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operating Conditions :

Final Anode Voltage	4000 volts.	7000 volts.
Anode 1 Voltage	250 volts.	250 volts.
Modulator Voltage for cut-off -25 to -70 volts.		-25 to -70 volts.
Focusing-Coil Current—See Note 3	500 A.T.	625 A.T.
Spot Position	See Note 4	



ALL SIZES IN MILLIMETRES.

- Note 1.** The plane through the tube axis and Pin No. 5 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on the same side of tube as Pin No. 5.
- Note 2.** Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on the bulb cone.
- Note 3.** Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing).
- Note 4.** The centre of the undeflected unfocused spot will fall within a circle having a 10 mm. radius concentric with the centre of the tube face.

90EB4**90EB4**

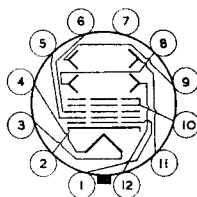
Oscilloscope Tube

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 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
Screen :		
Fluorescence	Blue.	
Persistence	Very Short.	
	(10 μ 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.

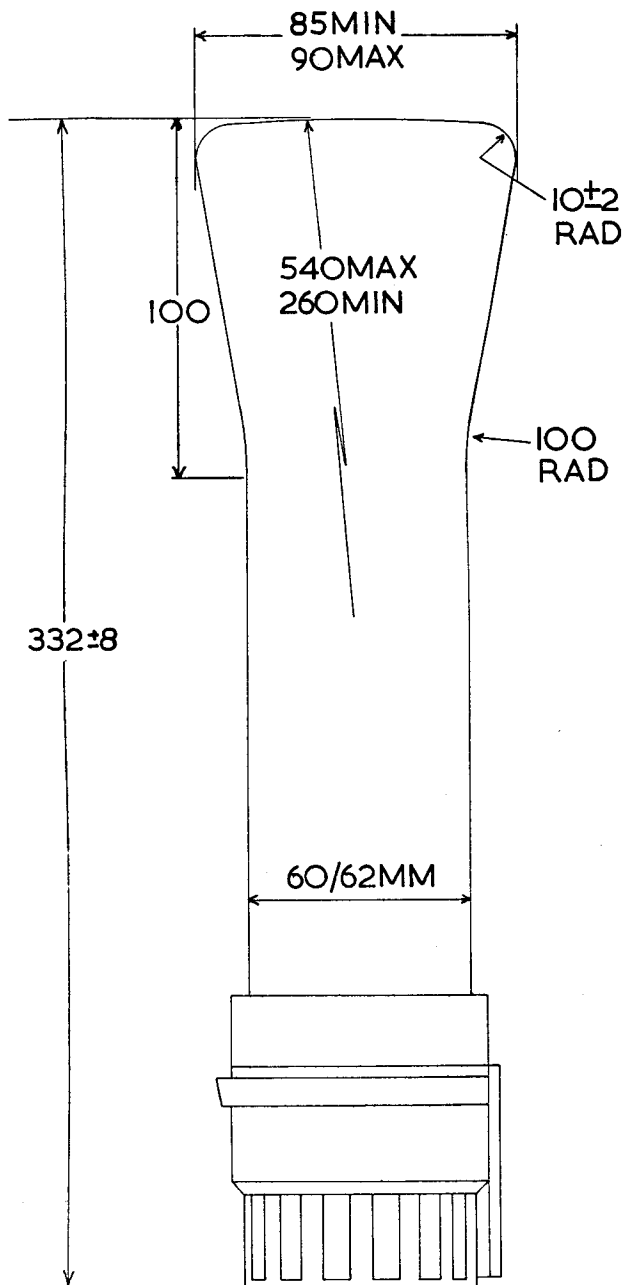
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

90EB4F**90EB4F**

Oscilloscope Tube

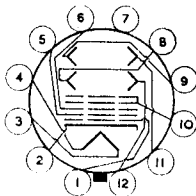
FLAT FACED BULB

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 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
Screen:		
Fluorescence	Blue.	
Persistence	Very Short.	
	(10 μ 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.

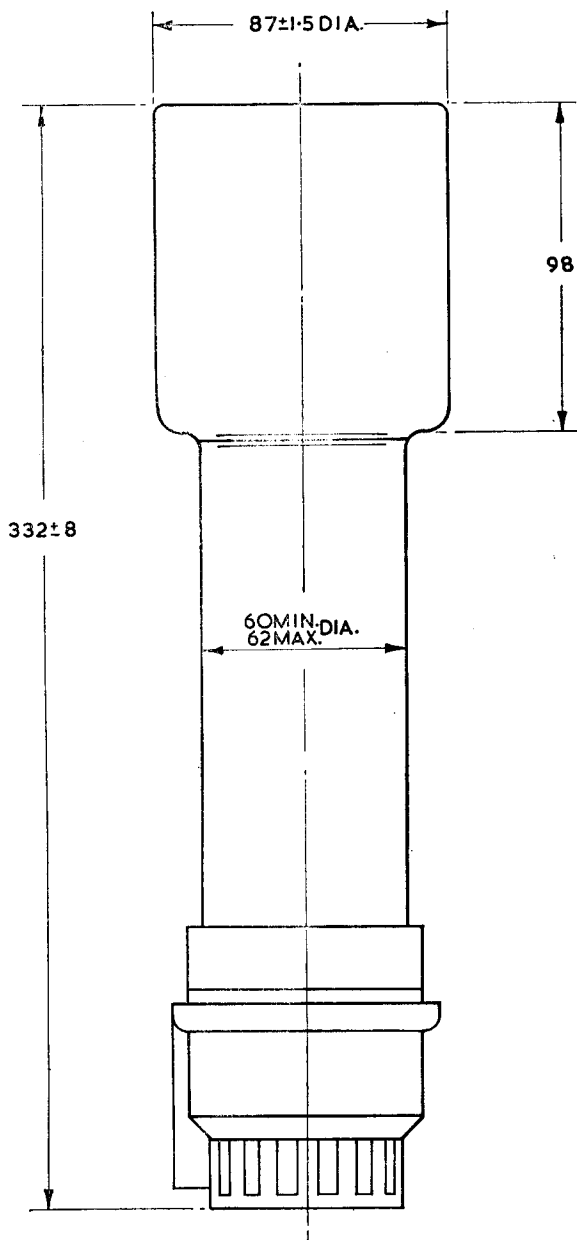
Typical Operating Conditions:

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.

Deflection Sensitivity:	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.

DIAMETER $3\frac{1}{2}$ " NOMINAL

90EB4P

Oscilloscope Tube

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

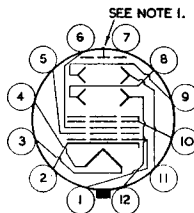
90EB4P

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 μ mf.	
Each X Plate to all other electrodes	25 μ mf.	
Each Y Plate to all other electrodes	25 μ mf.	
One X to one Y Deflector Plate	6 μ mf.	
Cathode to all other electrodes	15 μ mf.	
Screen :		
Fluorescence	Blue.	
Persistence	Very Short.	
(10 μ sec. max. for 1% initial brightness).		
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	332 $\pm$ 8 mm.	
Greatest Diameter of Bulb	92 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
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.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

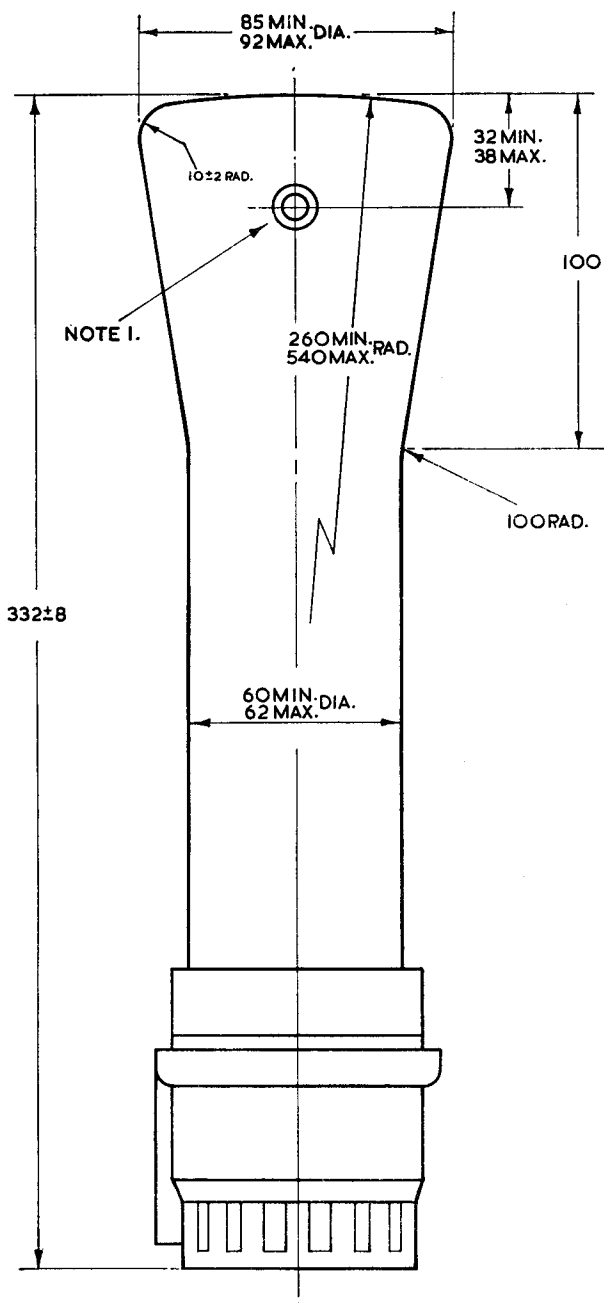
Anode 1	2000 volts.
Anode 2	380 volts.
Anode 3 (4000v. max.)	2000 volts.
Anode 4 Post Deflector Accelerator (6000v. max.)	4000 volts.
Modulator volts for cut-off	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.
X Plate	0.140
Y Plate	0.320

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.

90ED4**90ED4****Oscilloscope Tube**

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

GENERAL :**DATA**

Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	25 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
Screen :		
Fluorescence	Blue.	
Afterglow	Yellow	
Persistence of Afterglow	Long.	
(10 sec. min./100 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.

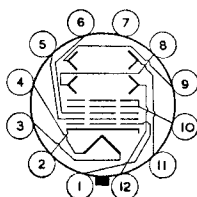
Pin 3—Heater.

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.

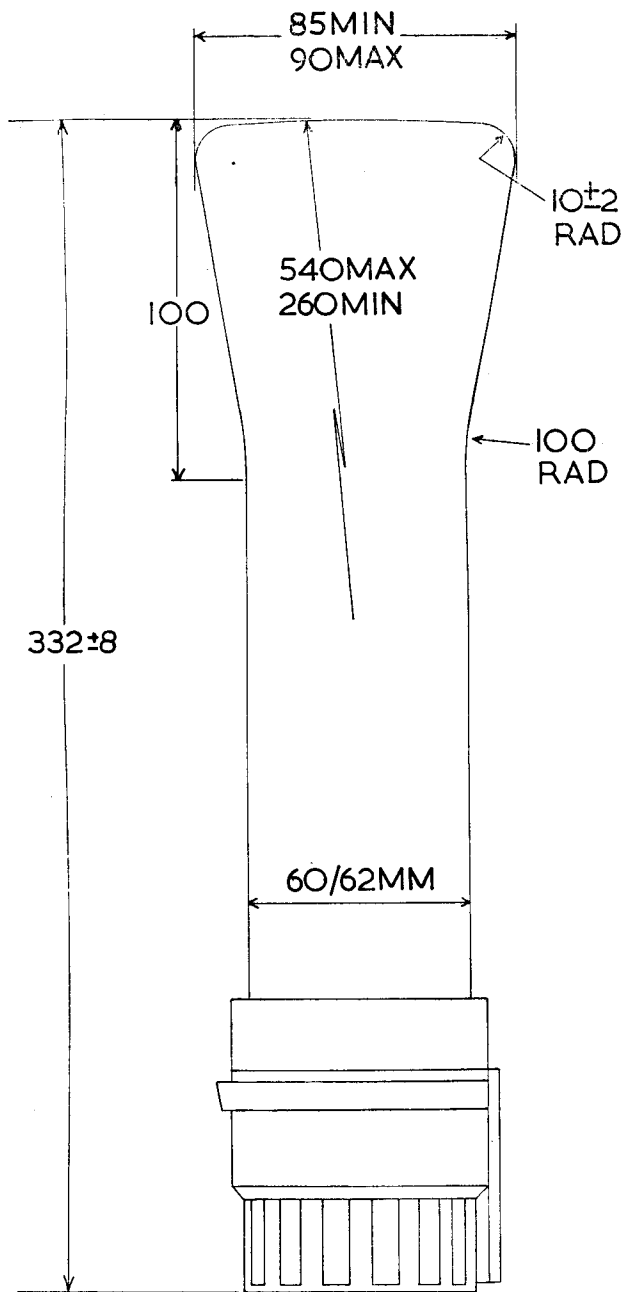
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

DIAMETER 3½" NOMINAL

90ED4P**90ED4P**

Oscilloscope Tube

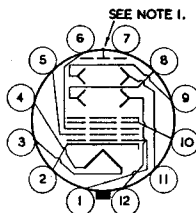
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

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	25μf.	
Each X Plate to all other electrodes	25μf.	
Each Y Plate to all other electrodes	25μf.	
One X to one Y Deflector Plate	6μf.	
Cathode to all other electrodes	15μf.	
Screen :		
Fluorescence	Blue.	
Afterglow	Yellow.	
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	92 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
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.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

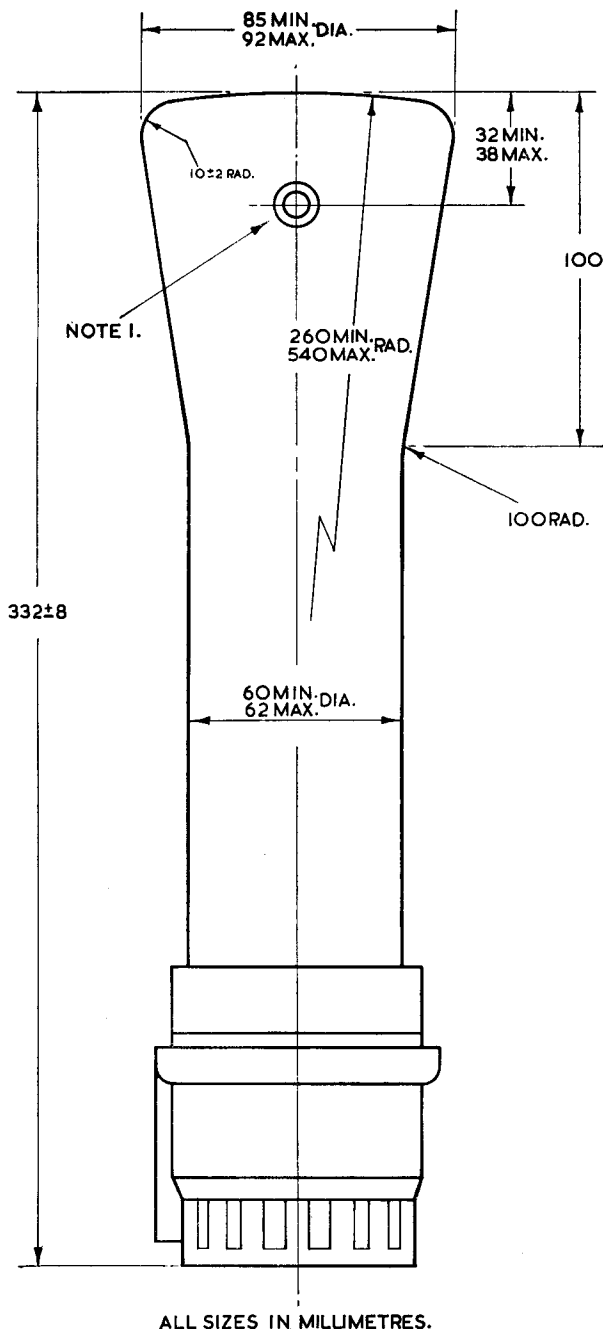
Anode 1	2000 volts.
Anode 2	380 volts.
Anode 3 (4000v. max.)	2000 volts.
Anode 4 Post Deflector Accelerator (6000v. max.)	4000 volts.
Modulator volts for cut-off	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.
X Plate	0.140
Y Plate	0.320

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.

90EG4**90EG4****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 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
Screen :		
Fluorescence	Green.	
Persistence of Afterglow	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	90 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Base	B.12.D.	

Pin 1—Modulator.

Pin 2—Cathode.

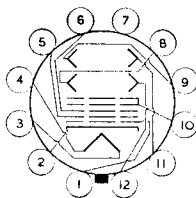
Pin 3—Heater.

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.

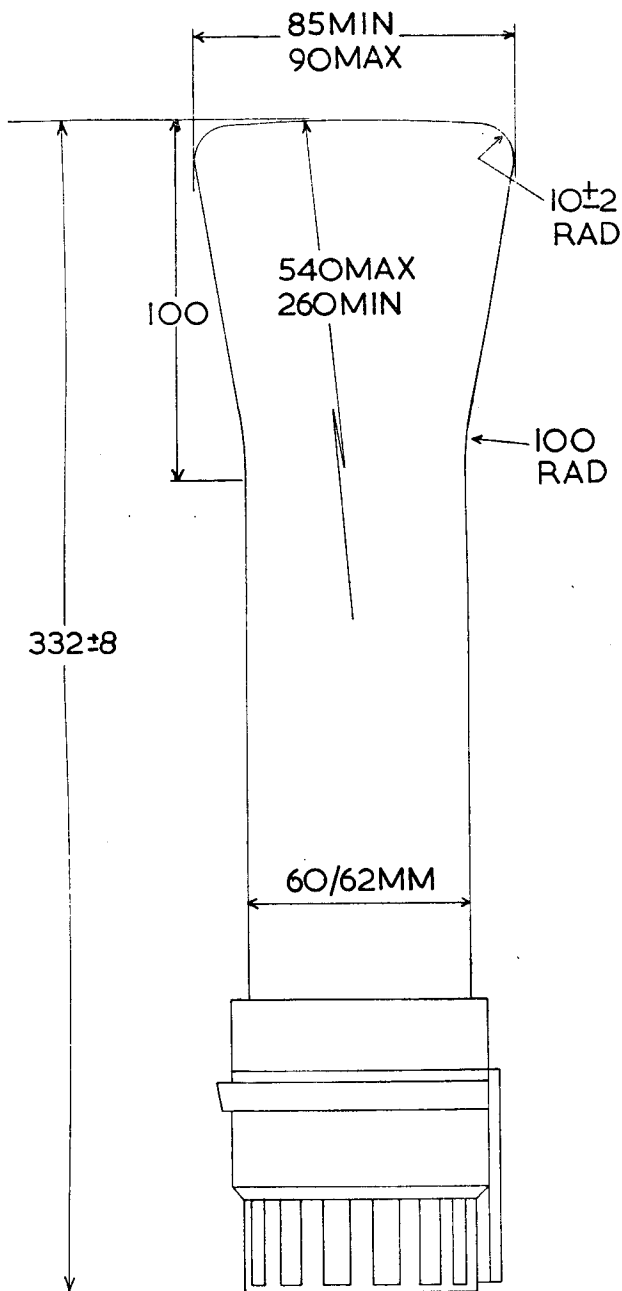
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

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

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	25	μμf.	
Each X Plate to all other electrodes	25	μμf.	
Each Y Plate to all other electrodes	25	μμf.	
One X to one Y Deflector Plate	6	μμf.	
Cathode to all other electrodes	15	μμf.	
Screen :			
Fluorescence	Green.		
Persistence	Short.		
(10m sec. min./100m sec. max. for 1% initial brightness).			
Focusing Method	Electrostatic.		
Deflecting Method	Electrostatic.		
Overall Length	332 ± 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.

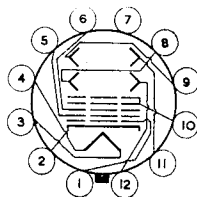
Pin 3—Heater.

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.

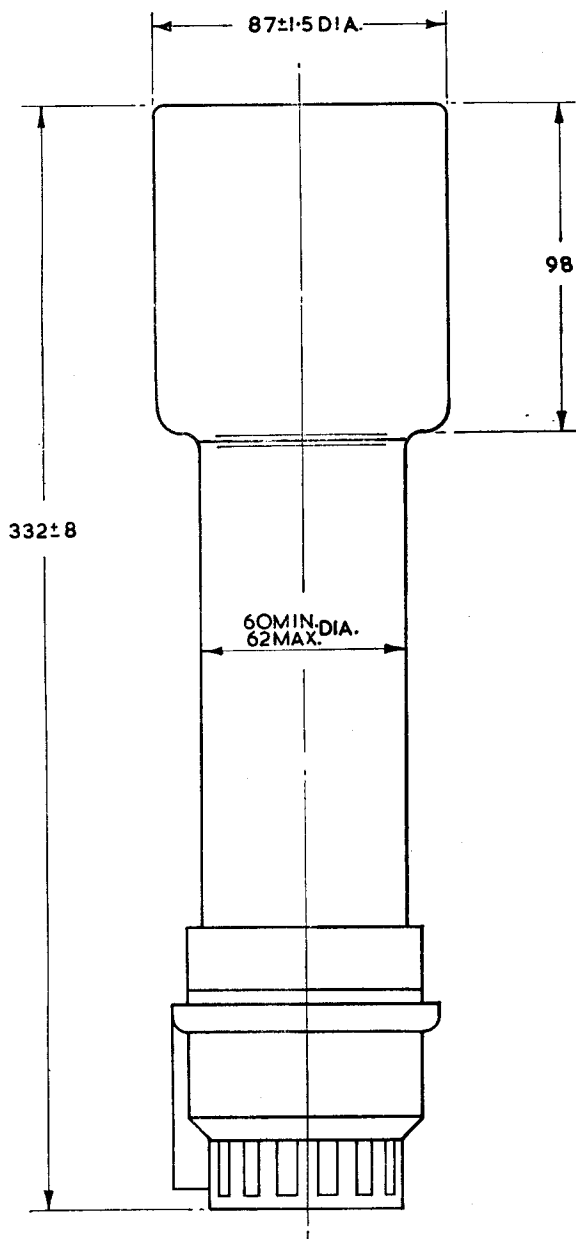
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

DIAMETER 3½" NOMINAL

90EG4P**90EG4P**

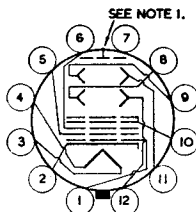
Oscilloscope Tube

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	25μmf.	
Each X Plate to all other electrodes	25μmf.	
Each Y Plate to all other electrodes	25μmf.	
One X to one Y Deflector Plate	6μmf.	
Cathode to all other electrodes	15μmf.	
Screen :		
Fluorescence	Green.	
Persistence	Short.	
(10m sec. min./100m sec. max. for 1% initial brightness).		
Focusing Method	Electrostatic.	
Deflecting Method	Electrostatic.	
Overall Length	332 ± 8 mm.	
Greatest Diameter of Bulb	92 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
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.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

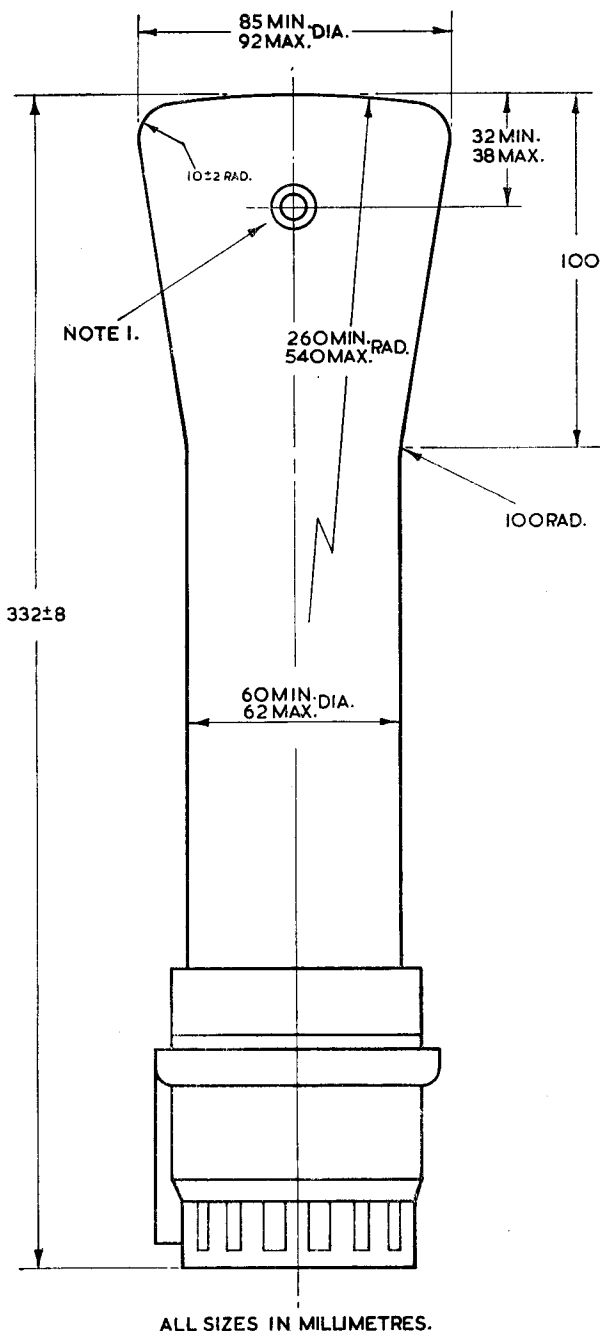
Anode 1	2000 volts.
Anode 2	380 volts.
Anode 3 (4000v. max.)	2000 volts.
Anode 4 Post Deflector Accelerator (6000v. max.)	4000 volts.
Modulator volts for cut-off	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.
X Plate	0.140
Y Plate	0.320

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.

90E04**90E04****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	μf.	
Each X Plate to all other electrodes	25	μf.	
Each Y Plate to all other electrodes	25	μf.	
One X to one Y Deflector Plate	6	μf.	
Cathode to all other electrodes	15	μf.	
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.

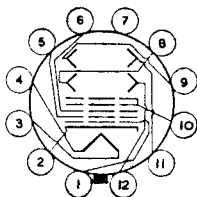
Pin 3—Heater.

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 :

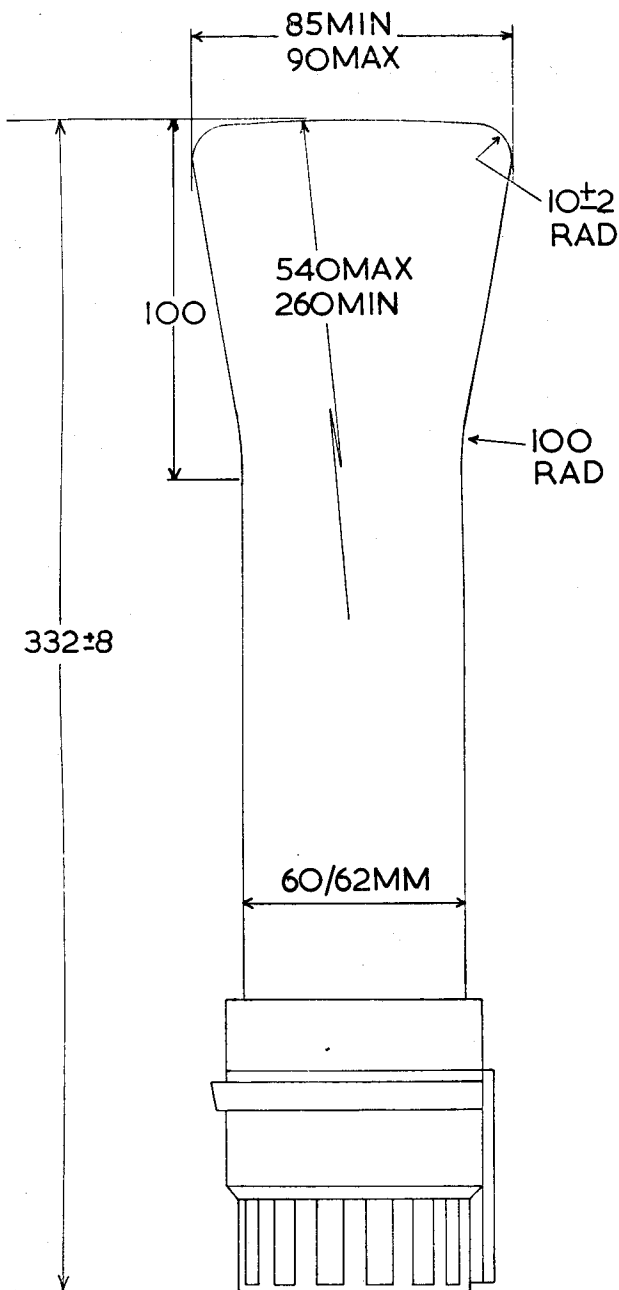
Anode 1	2000 volts.	2000 volts.
Anode 2	700 volts.	350 volts.
Anode 3 (5000v. max.)	4000 volts.	2000 volts.
Modulator volts for cut-off	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :

	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.

DIAMETER 3½" NOMINAL

90E04F**90E04F****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	25μf.	
Each X Plate to all other electrodes	25μf.	
Each Y Plate to all other electrodes	25μf.	
One X to one Y Deflector Plate	6μf.	
Cathode to all other electrodes	15μf.	
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	88.5 mm.	
Minimum Useful Screen Diameter	75 mm.	
Mounting Position	Any.	
Base	B.12.D.	

Pin 1—Modulator.

Pin 2—Cathode.

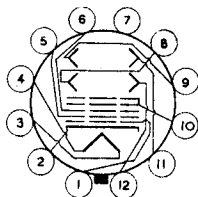
Pin 3—Heater.

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.

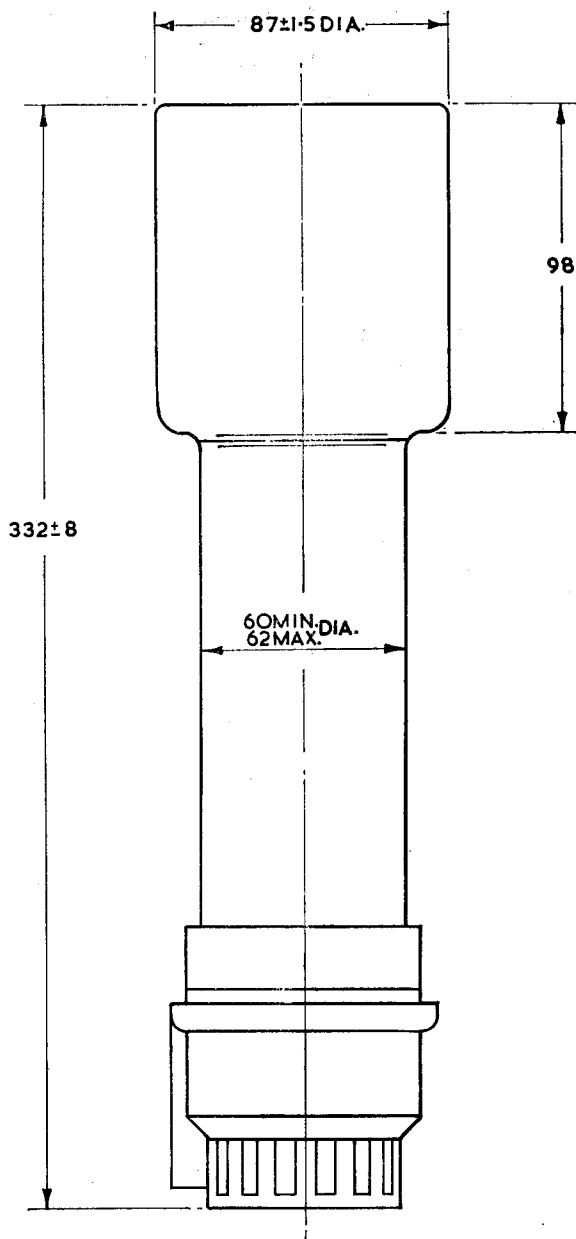
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

DIAMETER 3½" NOMINAL

90E04P**90E04P**

Oscilloscope Tube

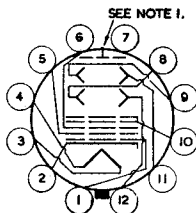
ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

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 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ f.	
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 $\pm$ 8 mm.	
Greatest Diameter of Bulb	92 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
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.
 Cap—Anode 4 P.D.A.

Typical Operating Conditions :

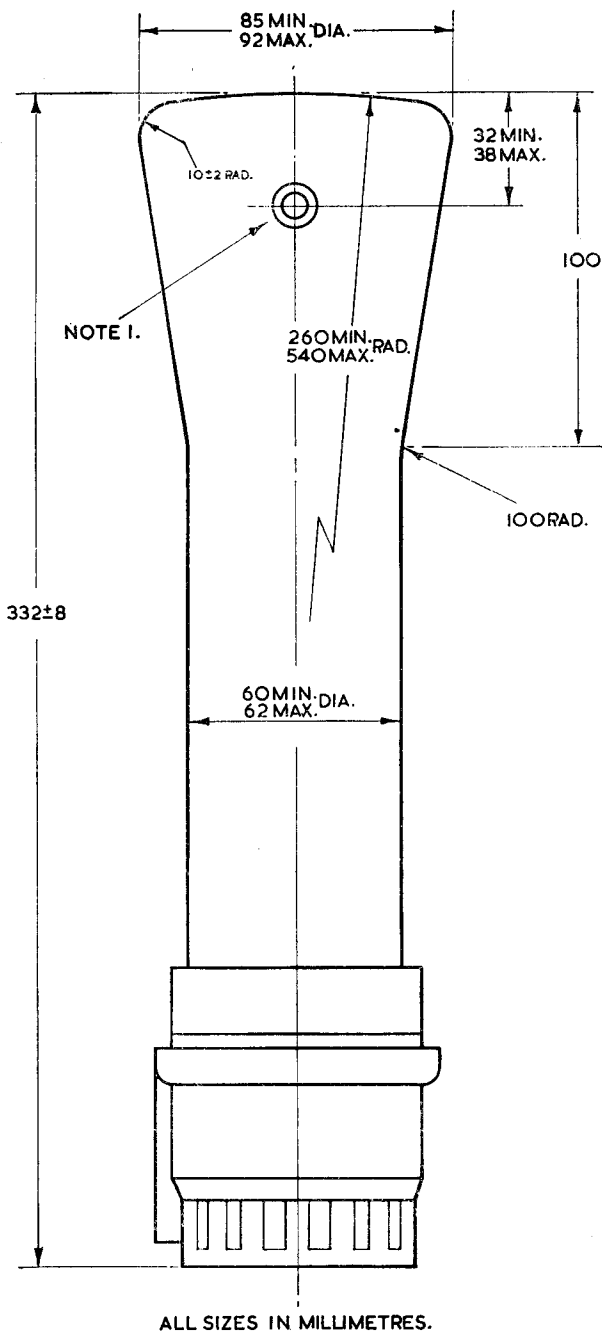
Anode 1	2000 volts.
Anode 2	380 volts.
Anode 3 (4000v. max.)	2000 volts.
Anode 4 Post Deflector Accelerator (6000v. max.)	4000 volts.
Modulator volts for cut-off	-40 to -80 volts.

Deflection Sensitivity :

	mm/volt.
X Plate	0.140
Y Plate	0.320

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.



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.

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

ELECTROSTATIC FOCUS. ELECTROSTATIC DEFLECTION

GENERAL:**DATA**

Heater: Voltage	4.0	a.c. or d.c. volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances.		
Modulator to all other electrodes	25 μ f.	
Each X Plate to all other electrodes	25 μ f.	
Each Y Plate to all other electrodes	25 μ f.	
One X to one Y Deflector Plate	6 μ f.	
Cathode to all other electrodes	15 μ 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.

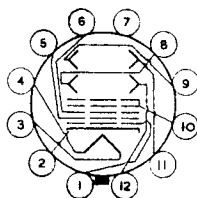
Pin 3—Heater.

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 :

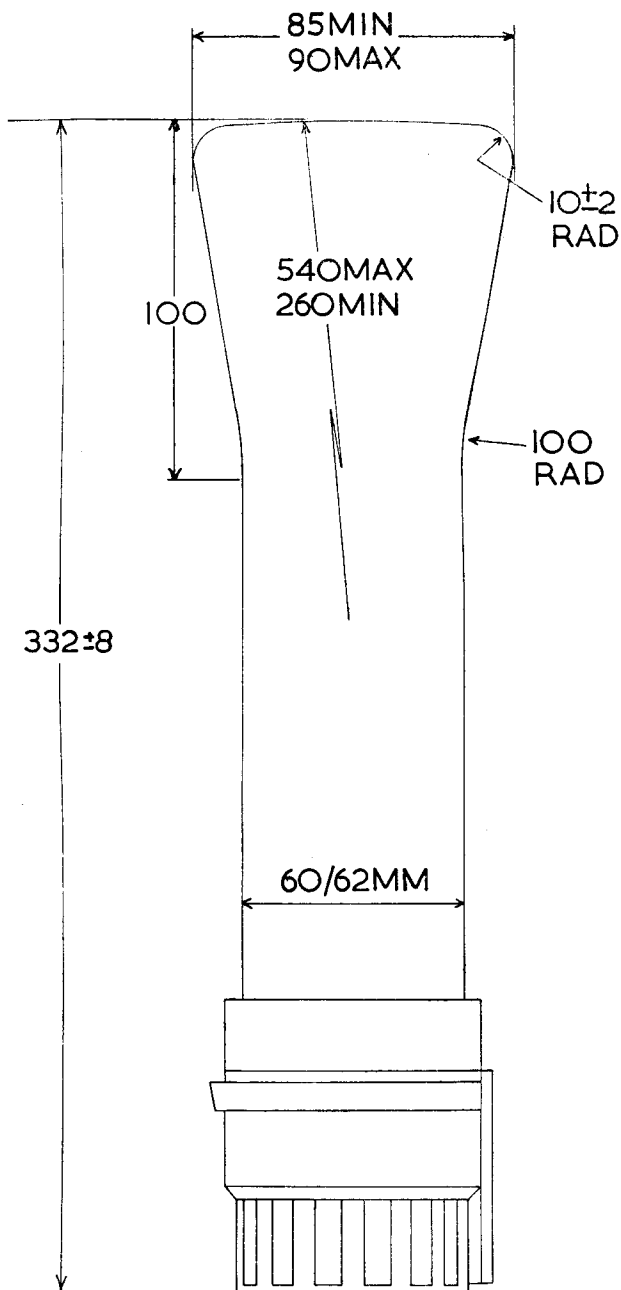
Anode 1	2000 volts.	2000 volts.
Anode 2	700 volts.	350 volts.
Anode 3 (5000v. max.)	4000 volts.	2000 volts.
Modulator volts for cut-off	-40 to -80 volts.	-40 to -80 volts.

Deflection Sensitivity :

	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.

DIAMETER $3\frac{1}{2}$ " NOMINAL**90EY4F**

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	$25\mu\text{f.}$	
Each X Plate to all other electrodes	$25\mu\text{f.}$	
Each Y Plate to all other electrodes	$25\mu\text{f.}$	
One X to one Y Deflector Plate	$6\mu\text{f.}$	
Cathode to all other electrodes	$15\mu\text{f.}$	
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 ± 8 mm.	
Greatest Diameter of Bulb	88.5 mm.	
Minimum Useful Screen Diameter	75 mm.	
Mounting Position	Any.	
Base	B.12.D.	

Pin 1—Modulatr.

Pin 2—Cathode.

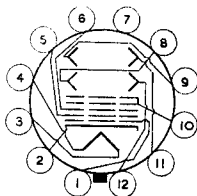
Pin 3—Heater.

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.

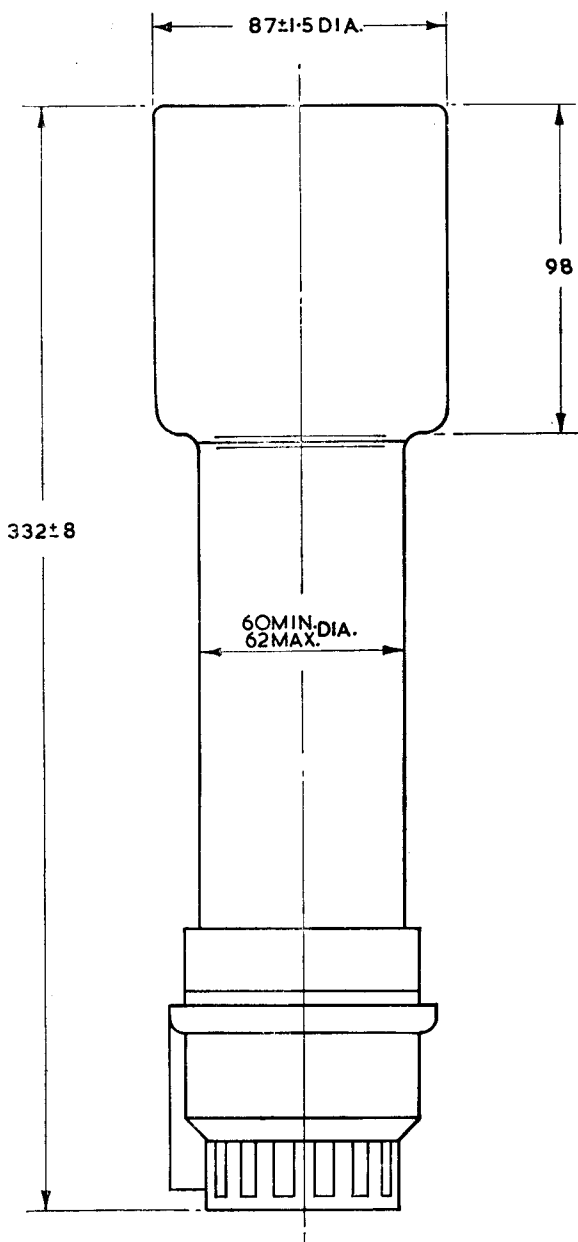
Typical Operating Conditions :

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.

Deflection Sensitivity :	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.

90EY4P**90EY4P****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	25μf.	
Each X Plate to all other electrodes	25μf.	
Each Y Plate to all other electrodes	25μf.	
One X to one Y Deflector Plate	6μf.	
Cathode to all other electrodes	15μf.	
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 ± 8 mm.	
Greatest Diameter of Bulb	92 mm.	
Minimum Useful Screen Diameter	70 mm.	
Mounting Position	Any.	
Anode Cap	Recessed Small Ball.	
Base	B.12.D.	

Pin 1—Modulator.

Pin 2—Cathode.

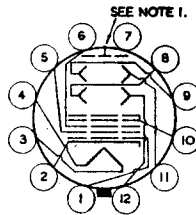
Pin 3—Heater.

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.

Cap—Anode 4 P.D.A.

Typical Operating Conditions :

Anode 1	2000 volts.
Anode 2	380 volts.
Anode 3 (4000v. max.)	2000 volts.
Anode 4 Post Deflector Accelerator (6000v. max.)	4000 volts.
Modulator volts for cut-off	-40 to -80 volts.

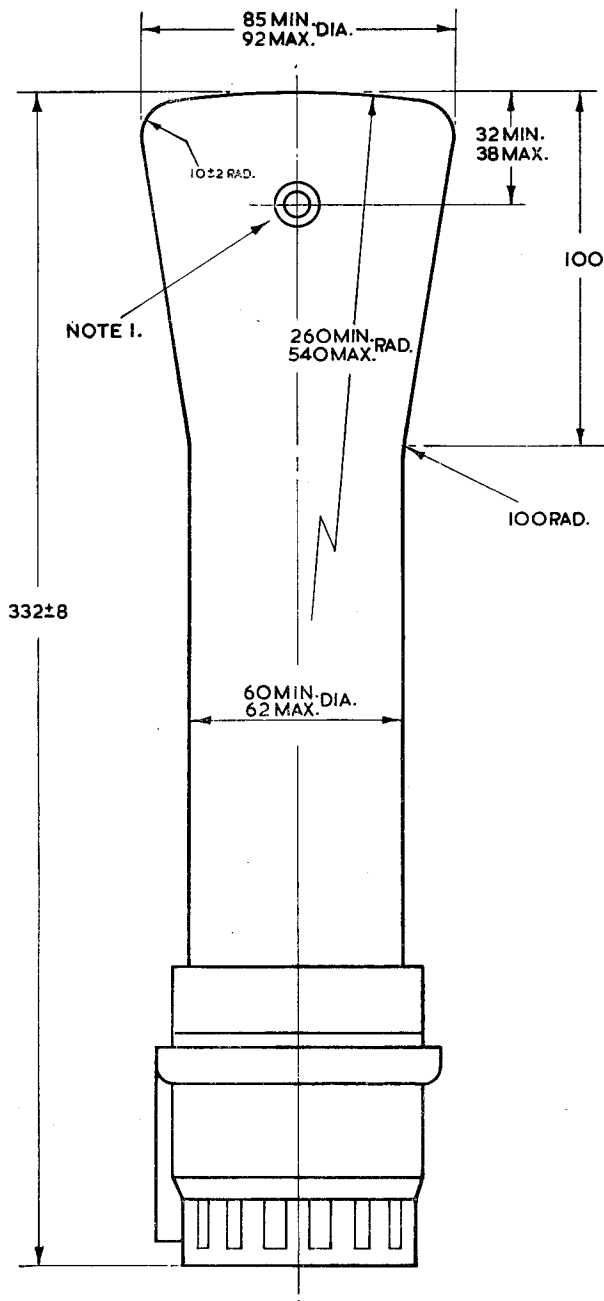
Deflection Sensitivity :

mm/volt.

X Plate	0.140
Y Plate	0.320

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.

DIAMETER 9" NOMINAL

9LO1A

Radar Tube

ELECTROSTATIC FOCUS. MAGNETIC DEFLECTION

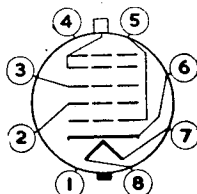
9LO1A

DATA

GENERAL

Heater : Voltage	4.0	ac or dc volts.
Current	1.0	amp.
Direct Inter-electrode Capacitances (Approx.)		
Modulator to All Other Electrodes	15 μ f.	
Anode 1 to All Other Electrodes	15 μ f.	
Cathode to All Other Electrodes	14 μ f.	
Screen :	Aluminium Backed.	
Fluorescence	Orange.	
Afterglow	Orange.	
Persistence of Afterglow	Long.	
Focusing Method	Electrostatic.	
Deflection Method	Magnetic.	
Overall Length	445 mm. $\pm$ 7 mm.	
Greatest Diameter of Bulb	230 mm.	
Minimum Useful Screen Diameter	190 mm.	
Mounting Position	Any.	
Anode Cap	American.	
Base	International Octal.	

- Pin 1—No connection.
 Pin 2—Anode 1.
 Pin 3—Anode 2.
 Pin 4—No connection.



- Pin 5—Modulator.
 Pin 6—Cathode.
 Pin 7—Heater.
 Pin 8—Heater.
 Side arm connection—
 Anode Cap.

Maximum Ratings

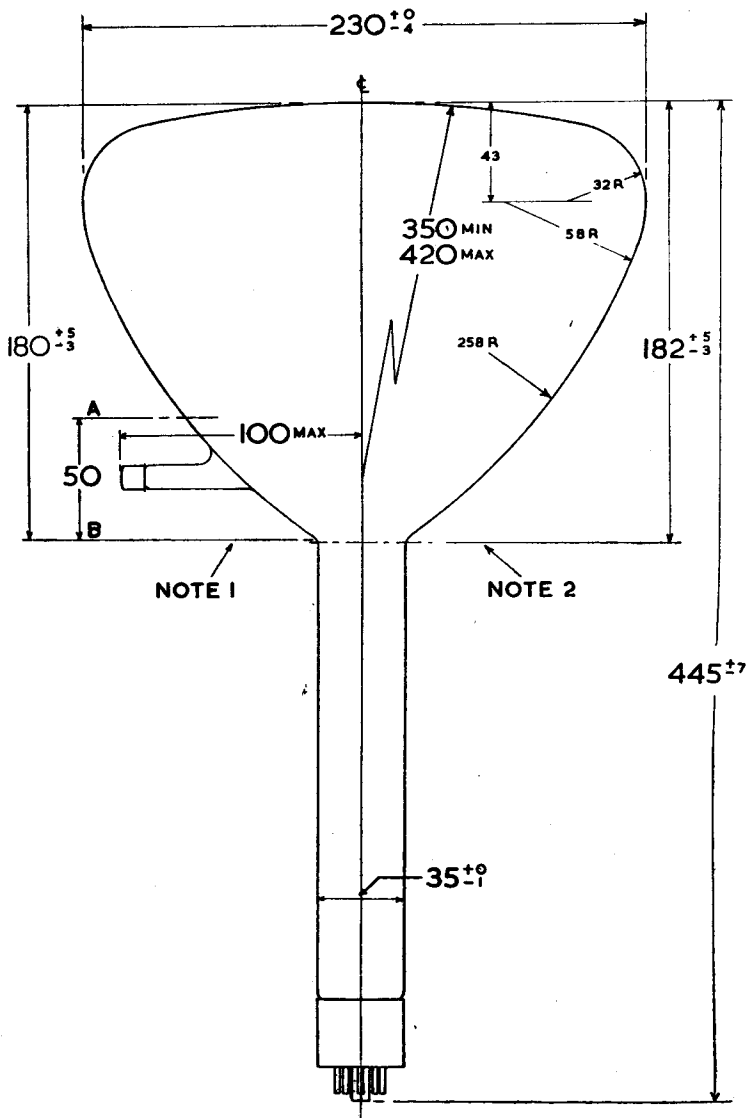
Final Anode Voltage	10000 volts.
Anode 1 Voltage	1450 volts.
Modulator Voltage :	
Negative bias value	100 volts.
Positive bias value	0 volts.
Peak Heater-Cathode Voltages :	
Heater negative with respect to cathode	125 volts.
Heater positive with respect to cathode	125 volts.

Typical Operation

Final Anode Voltage	8000 volts.
Anode 2 Voltage	1240 volts.
Anode 1 Voltage—See Note 3	1350 volts.
Modulator Voltage for cut-off	-75 volts.
Spot Position—See Note 4	

Note 3. Anode 1 must always be at least 50 volts positive to Anode 2.

Note 4. The centre of the undeflected focused spot will fall within a circle having 10 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES

- Note 1. The plane through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap by an angular tolerance (measured about the tube axis) of 10° . The position of the anode cap along the tube axis is between A and B and is on the same side of the tube as the spigot key.
- Note 2. Reference line is determined by position where gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.

PMT57

HIGH DEFINITION

Television Monitor Tube

MAGNETIC FOCUS. MAGNETIC DEFLECTION

PMT57**DATA****GENERAL:**

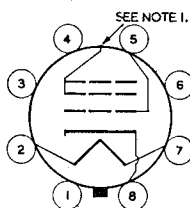
Heater: Voltage	4.0 a.c. or d.c. volts.
Current	1.0 amp.
Direct Inter-electrode Capacitances:	
Modulator to all other electrodes	9.0 μ f.
Cathode to all other electrodes	9.0 μ f.
Screen:	Aluminium Backed.
Fluorescence	White.
Persistence	(5m sec./25 m sec. for 1% initial brightness.)
Focussing Method	Magnetic
Deflecting Method	Magnetic
Overall Length	500mm $\pm$ 10 mm.
Greatest Diameter of Bulb	257 mm.
Minimum Useful Screen Diameter	230 mm.
Mounting Position	Any
Anode Cap	Cavity Cap BSS/448/CT8.
Base	International Octal.

Pin 1—No connection.

Pin 2—Heater.

Pin 3—Pin omitted.

Pin 4—Pin omitted.



Pin 5—Modulator

Pin 6—Pin omitted.

Pin 7—Heater.

Pin 8—Cathode.

Cap—Anode.

Maximum Ratings:

Anode Voltage 15000 volts.

Modulator Voltage:

Negative bias value 128 volts.

Positive bias value 0 volts

Peak Heater-Cathode Voltages:

Heater negative with respect to cathode . . . 150 volts

Heater positive with respect to cathode . . . 150 volts

Line Width 0.3 mm.

Interlaced 405 line T.V. raster. Beam Current 100 μ A.

Line length 200 mm.

Typical Operating Conditions:

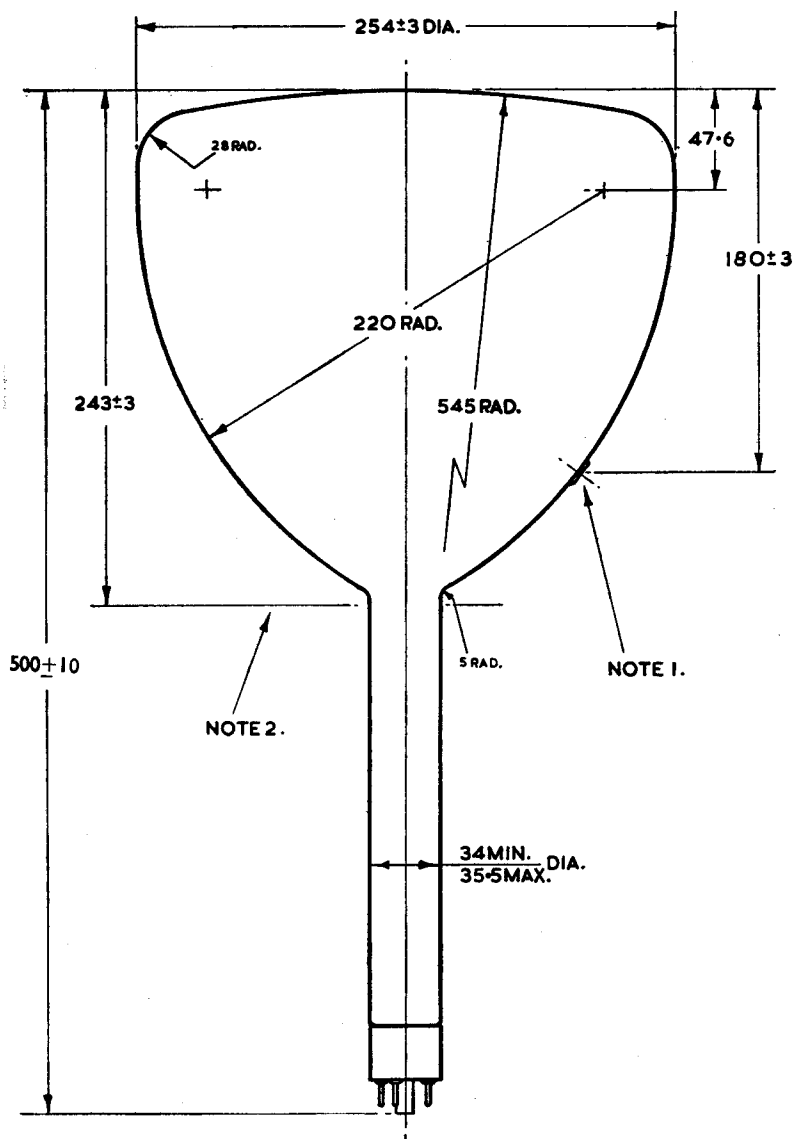
Anode Voltage 10,000 volts

Modulator Voltage for cut-off -50 to -85 volts.

Focussing-Coil Current—See Note 3 550 A.T.

Spot Position See Note 4

Note 4. The centre of the undeflected unfocused spot will fall within a circle having 10 mm. radius concentric with the centre of the tube face.



ALL SIZES IN MILLIMETRES.

- Note 1.** The "plane" through the tube axis and the spigot key may vary from the plane through the tube axis and the anode cap, by an angular tolerance (measured about the tube axis) of 10° . The anode cap is on the same side of the tube as the spigot key.
- Note 2.** Reference line is determined by position where a gauge 36 mm. I.D. and 50 mm. long will rest on bulb cone.
- Note 3.** Focusing Coil positioned with centre line of air gap approximately 80 mm. from reference line (see outline drawing.)

Vacuum Photocell

Quartz Envelope

GENERAL

Spectral Response	Type QA.
Wavelength of Maximum Response	3700 $\pm$ 500 A.U.
Cathode :	
Shape	V - shaped cross section.
Projected Width	25 mm.
Length	40 mm.
Anode	Cylindrical wire mesh.
Inter-electrode Capacitance	8 μ f.
Maximum Overall Length	120 mm.
Length to Cathode centre	75 mm. approx.
Maximum bulb diameter	36 mm.
Mounting position	Any.
Basing	Flying Leads.
Base Connections	Green - Cathode. Red - Anode.

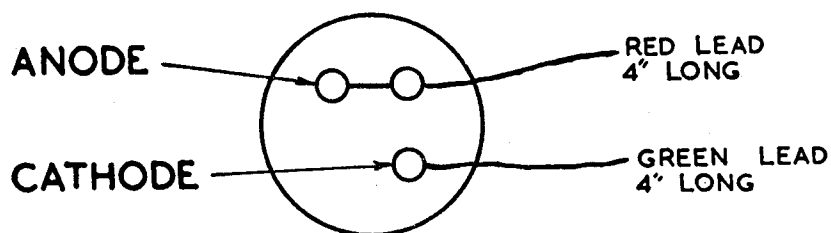
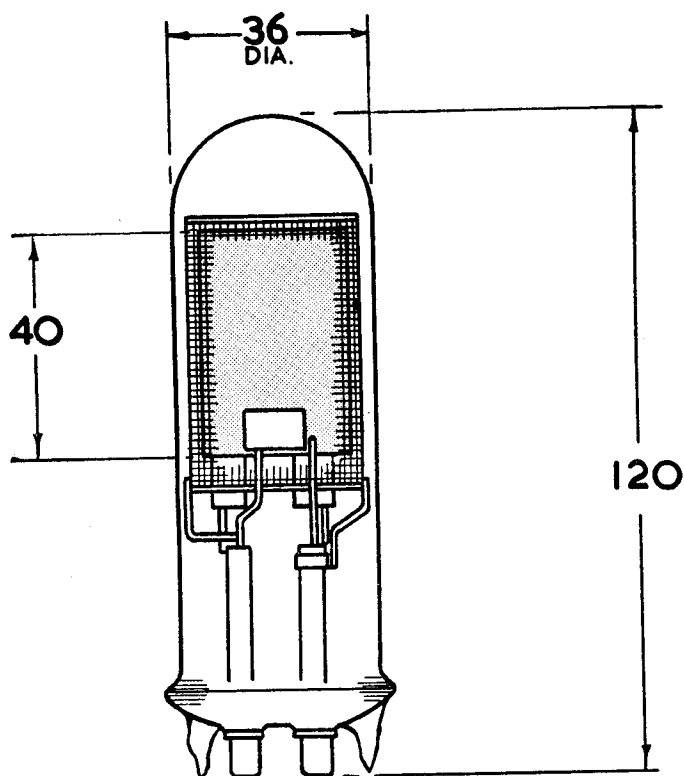
Maximum Ratings

Anode Supply Voltage (DC or peak AC)	50.
Average cathode current	1 μ A.
Peak cathode current	4 μ A.
Ambient Temperature	50°C.

Characteristics

Operating voltage	30-50.
Maximum dark current at 30 volts	5 x 10 ⁻¹² amps.
*Minimum sensitivity at operating voltage	20 μ A/lumen.

*Measured with an incandescent tungsten filament at a colour temperature of 2700°K.



ALL SIZES IN MILLIMETRES.

SPECTRAL SENSITIVITY CURVES

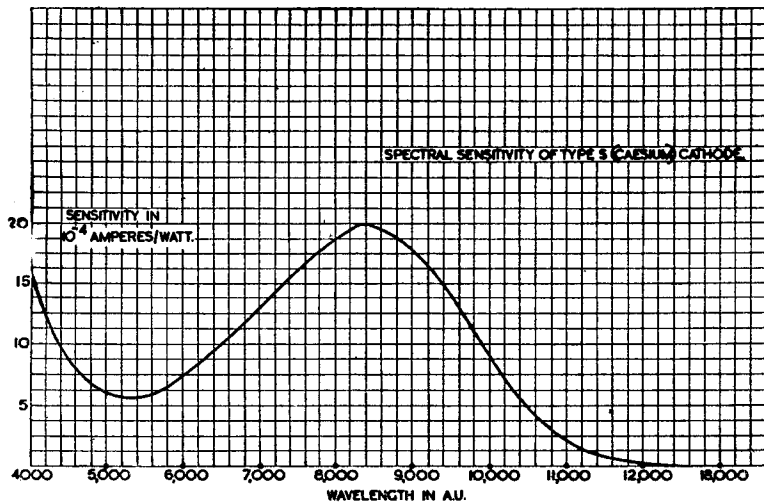


Fig. 1

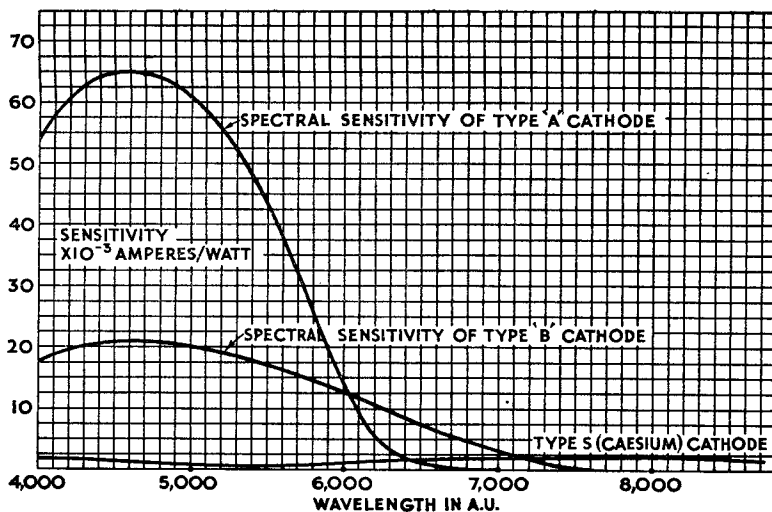


Fig. 2

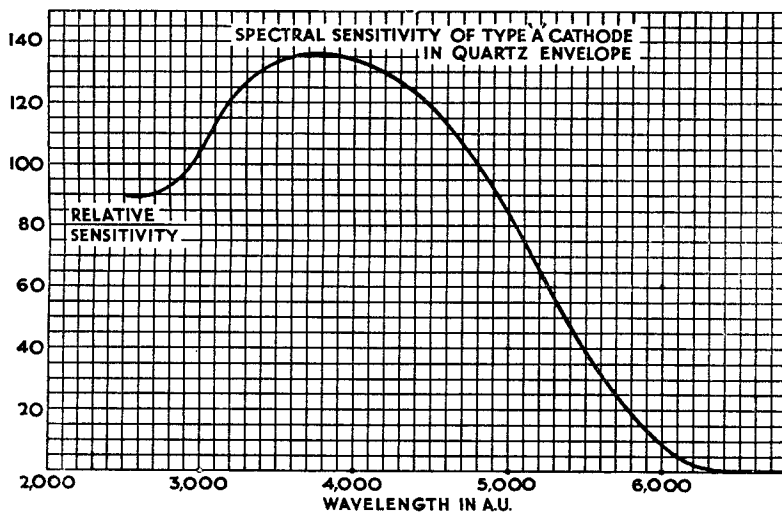


Fig. 3