



VALVES

TECHNICAL SERVICE



ELECTRONICS

This series of tubes will be available with types 1,4,7,11 & 26 screen phosphors as indicated below.

<u>SCREENS</u>	<u>Persistence</u> +	<u>Colour</u>	<u>Application</u>
6EP1	100 ms	Green	Visual
6EP4	1 ms	White	Visual/Photo-graphic
6EP7	20 s	Blue Flash (Yellow after- glow	Visual
6EP11	1 ms	Blue	Photographic
6EP26	170 s	Orange flash Orange after- glow	Visual

+ Persistence is the time taken for the brightness to decrease from 1 f.l. to approximately 0.01 f.l, measured with all anode potentials at maximum.

16 cm electrostatic focus and deflection instrument cathode ray tube suitable for use in high precision instruments having a flat screen and one stage of post deflection acceleration.

Base Connections (B14A Base) Medium shell diheptal 14AJ

1	2	3	4	5	6	7
h	k	g	a ₁	a ₂	N.P.	Y1
8	9	10	11	12	13	14
Y2	a ₃	X2	X1	N.C.	N.P.	h

Side contact CT8 a₄.

Heater

V _h	6.3	V
I _h	0.5	A

The heater is suitable for parallel operation only.

THE GENERAL ELECTRIC CO. LTD OF ENGLAND.
Head Office: Magnet House, Kingsway, London, W.C.2.

Ratings

V_{a4}	5 2 min.	kV kV
V_{a3}	2.5 1 min.	kV kV
V_{a2}	2	kV
V_{a1}	2.5 1 min.	kV kV
$-V_g$ (cathode hot)	0 min 200	V V
V_g (cathode cold)	200	V
V_{h-k}	150	V
V_{x1-x2}	1	kV
R_{x-a3}	5	Mohms
R_{y-a3}	5	Mohms
R_{g-k}	2	Mohms

The maximum ratio between V_{a4} and V_{a3} is two.

Typical Operation

V_{a4}	4.0	kV
V_{a3}	2.0	kV
V_{a2} (focus)	$\frac{V_{a3}}{6}$ approx.	V
V_{a1}	2.0	kV
V_g (for cut-off)	$\frac{V_{a1}}{30}$ approx.	V
I_{a3}	1	microamp
I_{screen}	5	microamps
* S_x	$\frac{1000}{V_{a3}}$	m.m./V
* S_y	$\frac{720}{V_{a3}}$	m.m./V

$$\phi S_x \quad \frac{850}{V_{a3}} \quad \text{m.m./V}$$

$$\phi S_y \quad \frac{600}{V_{a3}} \quad \text{m.m./V}$$

$$\times V_{a3} = V_{a4}$$

$$\phi V_{a4} = 2 V_{a3}$$

Capacitance

$$C_k\text{-all} \quad 8 \quad \text{pF}$$

$$C_g\text{-all} \quad 17 \quad \text{pF}$$

$$C_{x1-x2} \quad 2.5 \text{ approx.} \quad \text{pF}$$

$$C_{y1-y2} \quad 3 \text{ approx.} \quad \text{pF}$$

$$\begin{array}{l} C_{x1\text{-all}}) \\ C_{x2\text{-all}}) \end{array} \quad 8 \text{ approx.} \quad \text{pF}$$

$$\begin{array}{l} C_{y1\text{-all}}) \\ C_{y2\text{-all}}) \end{array} \quad 7.5 \text{ approx.} \quad \text{pF}$$

$$C_{y1-x1 \text{ or } x2} \quad 0.1 \text{ approx.} \quad \text{pF}$$

$$C_{y2-x1 \text{ or } x2} \quad 0.2 \text{ approx.} \quad \text{pF}$$

Screen Phosphor

The tube will be available with standard green and photographic blue screens.

Spot Centring

The undeflected spot will fall within a radius of 7 m.m. concentric with the tube ~~plates~~.

face.

Screen Area

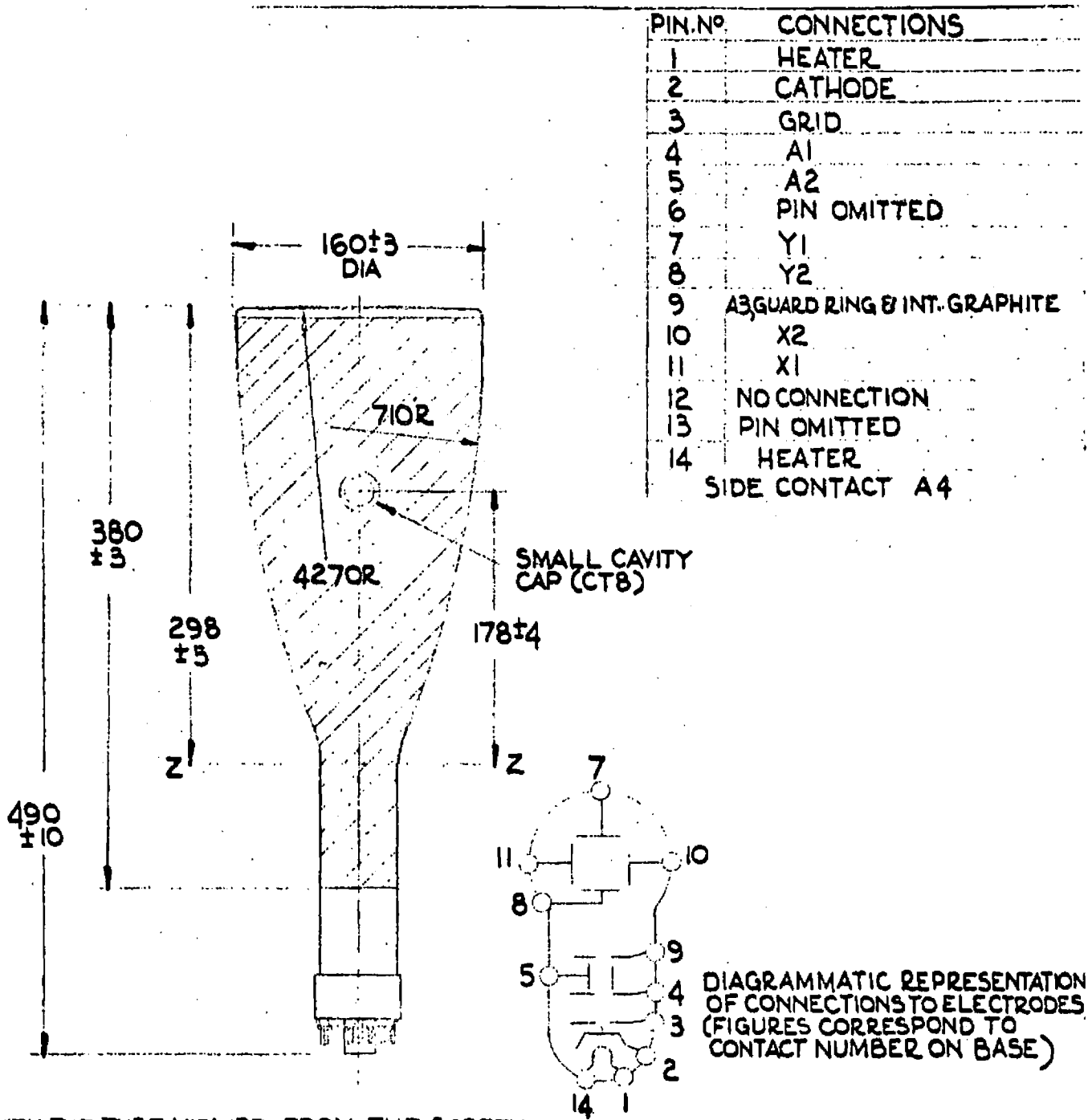
The minimum useful screen area is a circle radius 7 cms from the centre of the screen.

General

The plate sensitivity for a deflection of less than 75% of the useful scan will not differ from the plate sensitivity for a deflection of 25% of the useful scan by more than 2%.

Orthogonality of deflection axis $\pm 1^\circ$.

Viewed from the screen end with the spigot upwards and a positive voltage on deflector plate X1 the spot will move to the left. Viewed from the screen end with the spigot up a positive voltage on the deflector plate Y1 the spot will move upwards.



WITH THE TUBE VIEWED FROM THE SCREEN END AND WITH THE BASE SPIGOT UPPERMOST A POSITIVE POTENTIAL APPLIED TO CONTACT 11 SHALL DEFLECT THE SPOT TO THE LEFT & A POSITIVE POTENTIAL APPLIED TO CONTACT 7 SHALL DEFLECT THE SPOT UPWARDS

