



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.

<u>Base Connections</u> (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
$\propto S_x$	$\frac{1000}{V_{a3}}$	m.m./V
$\propto S_y$	$\frac{720}{V_{a3}}$	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

$C_k\text{-all}$	8	pF
$C_g\text{-all}$	17	pF
C_{x1-x2}	2.5 approx.	pF
C_{y1-y2}	3 approx.	pF
$C_{x1\text{-all}}$) $C_{x2\text{-all}}$)	8 approx.	pF
$C_{y1\text{-all}}$) $C_{y2\text{-all}}$)	7.5 approx.	pF
C_{y1-x1} or $x2$	0.1 approx.	pF
C_{y2-x1} or $x2$	0.2 approx.	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

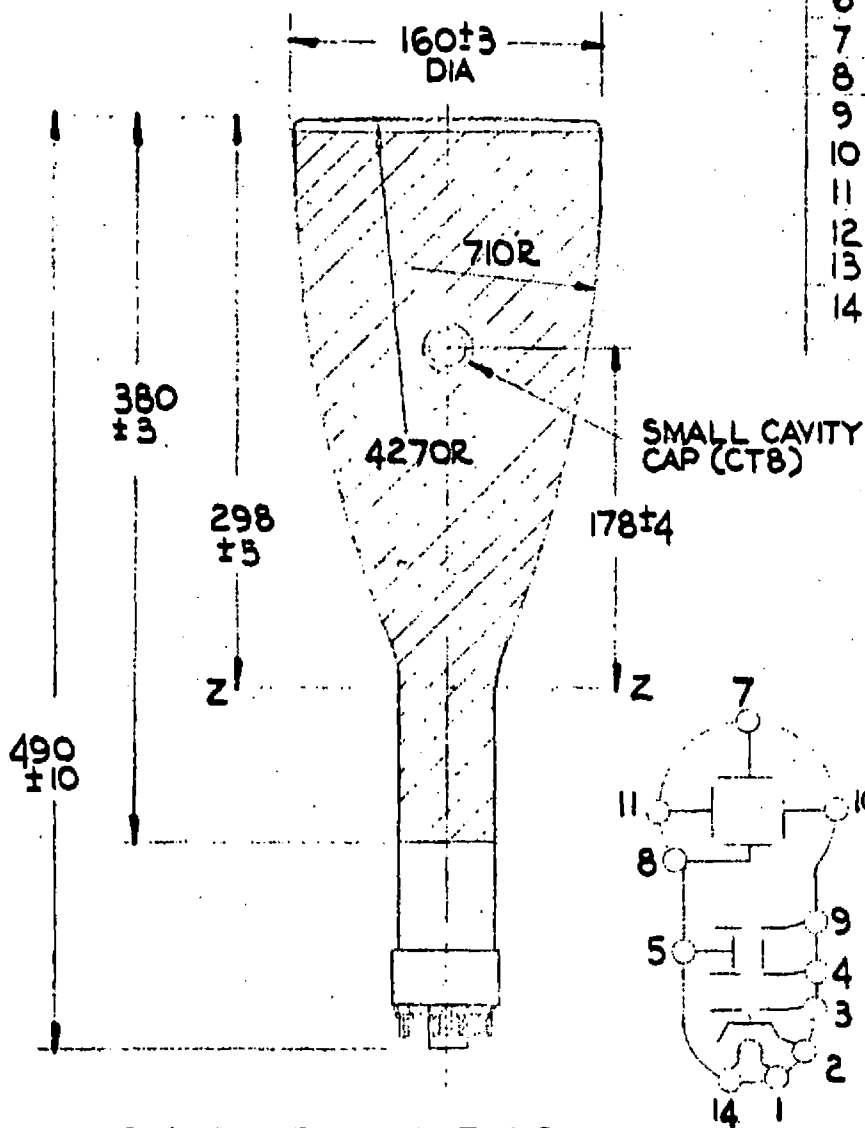
The minimum useful screen area is a circle radius 7 cms from the centre of the screen.

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.



PIN NO.	CONNECTIONS
1	HEATER
2	CATHODE
3	GRID
4	A1
5	A2
6	PIN OMITTED
7	Y1
8	Y2
9	A3 GUARD RING & INT. GRAPHITE
10	X2
11	X1
12	NO CONNECTION
13	PIN OMITTED
14	HEATER
	SIDE CONTACT A4

DIAGRAMMATIC REPRESENTATION OF CONNECTIONS TO ELECTRODES (FIGURES CORRESPOND TO CONTACT NUMBER ON BASE)

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

