INSTRUMENT CATHODE-RAY TUBE

14 cm diagonal, rectangular flat-faced oscilloscope tube with mesh and metal backed screen. The tube has side connections to the x- and y-plates, and is intended for use in transistorized oscilloscopes up to a frequency of 50 MHz.

QUICK REFERENCE DATA			
Final accelerator voltage	$V_{g8(\ell)}$	10	kV
Display area		100 x 80	mm^2
Deflection coefficient, horizontal	M_x	15.5	V/cm
vertical	M_y	4.2	V/cm

Blue Binder, Tab 4

SCREEN : Metal backed phosphor

	Colour	Persistence
D14-121GH	green	medium short
D14-120GM	pusplish blue	long
D14-120GP	bluish green	medium short

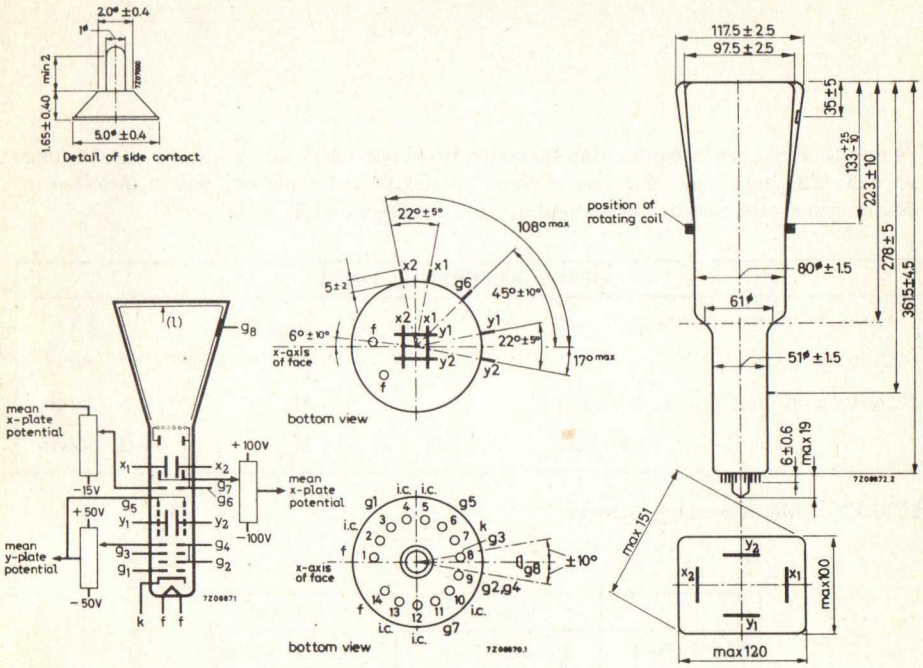
Useful screen dimensions	min.	100 x 80	mm^2
Useful scan at $V_{g8(\ell)}/V_{g2,g4} = 6.7$,			
horizontal	min.	100	mm
vertical	min.	80	mm
Spot eccentricity in horizontal and vertical directions		6	mm

→ **HEATING:** Indirect by A.C. or D.C.; parallel supply

Heater voltage	V_f	6.3	V
Heater current	I_f	300	mA

MECHANICAL DATA

Dimensions in mm



Mounting position: any

The tube should not be supported by the base alone and under no circumstances should the socket be allowed to support the tube.

Dimensions and connections

See also outline drawing

Overall length (socket included)	max.	385	mm
Face dimensions	max.	100 x 120	mm^2
Net weight	approx.	900	g
Base		14 pin, all glass	

Accessories

Socket (supplied with tube)	type 55566
Final-accelerator contact connector	type 55563
Mu-metal shield	type 55581A

CAPACITANCES

x_1 to all other elements except x_2	$C_{x_1(x_2)}$	5.5	pF
x_2 to all other elements except x_1	$C_{x_2(x_1)}$	5.5	pF
y_1 to all other elements except y_2	$C_{y_1(y_2)}$	4	pF
y_2 to all other elements except y_1	$C_{y_2(y_1)}$	4	pF
x_1 to x_2	$C_{x_1x_2}$	2.2	pF
y_1 to y_2	$C_{y_1y_2}$	1.7	pF
Control grid to all other elements	C_{g_1}	5.5	pF
Cathode to all other elements	C_k	4.5	pF

FOCUSING Electrostatic

DEFLECTION Double electrostatic

x-plates symmetrical

y-plates symmetrical

If use is made ot the full deflection capabilities of the tube the deflection plates will intercept part of the electron beam; hence a low impedance deflection plate drive is desirable.

Angle between x and y traces 90 ± 1^o

Angle between x trace and the horizontal axis of the face max. 5^o [1])

LINE WIDTH

Mearured with the shrinking raster method under typical operating conditions, adjusted for optimum spot size at a beam current $I_\ell = 10\ \mu A$.

Line width screen centre	l.w.	0.40	mm
over the whole screen area	l.w.	av. < 0.45	mm

[1]) See page 5