

## INSTRUMENT CATHODE-RAY TUBE

14 cm diagonal rectangular flat-faced oscilloscope tube with domed post-deflection acceleration mesh and metal-backed screen, primarily intended for use in compact oscilloscopes with 25 to 50 MHz bandwidth. This tube features a 1,5 W cathode with short warm-up time (quick-heating cathode).

## QUICK REFERENCE DATA

Final accelerator voltage	$V_{g8(\ell)}$	10 kV
Display area		100 x 80 mm <sup>2</sup>
Deflection coefficient		
horizontal	$M_x$	12,8 V/cm
vertical	$M_y$	6,3 V/cm

## OPTICAL DATA

Screen		metal-backed phosphor
type		GH, colour green
persistence		medium short
Useful screen dimensions	$\geq$	100 x 80 mm <sup>2</sup>
Useful scan		
horizontal	$\geq$	100 mm
vertical	$\geq$	80 mm
Spot eccentricity in horizontal and vertical directions	$\leq$	6,5 mm

## HEATING

Indirect by a.c. or d.c.; parallel supply

Heater voltage	$V_f$	6,3 V
Heater current	$I_f$	240 mA

## MECHANICAL DATA

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.

Net mass		approx. 1000 g
Base		14 pin, all glass
Final accelerator contact		small ball (JEDEC J1-25)

blue binder, tab 4





**Dimensions and connections**

See also outline drawing

Overall length	≠	343 mm
Face dimensions	≠	100 x 120 mm <sup>2</sup> (note 1)

**Accessories**

Socket, supplied with tube	type 55566
Mu-metal shield	type 55592
Final accelerator contact connector	type 55569

**FOCUSING**

electrostatic

**DEFLECTION**

double electrostatic

x-plates symmetrical

y-plates symmetrical

Angle between x and y-traces  $90 \pm 1^\circ$ Angle between x-trace and horizontal axis of the face  $\leq 5^\circ$  \*

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

**CAPACITANCES**

x <sub>1</sub> to all other elements except x <sub>2</sub>	C <sub>x1(x2)</sub>	7 pF
x <sub>2</sub> to all other elements except x <sub>1</sub>	C <sub>x2(x1)</sub>	7 pF
y <sub>1</sub> to all other elements except y <sub>2</sub>	C <sub>y1(y2)</sub>	4 pF
y <sub>2</sub> to all other elements except y <sub>1</sub>	C <sub>y2(y1)</sub>	4 pF
x <sub>1</sub> to x <sub>2</sub>	C <sub>x1x2</sub>	2,2 pF
y <sub>1</sub> to y <sub>2</sub>	C <sub>y1y2</sub>	1,3 pF
Control grid to all other elements	C <sub>g1</sub>	6 pF
Cathode to all other elements	C <sub>k</sub>	2,7 pF

\* The tube is provided with a rotation coil, concentrically wound around the tube neck, enabling the alignment of the x-trace with the mechanical x-axis of the screen. The coil has 1000 turns and a resistance of max. 350 Ω. Under typical operating conditions, max. 35 ampere-turns are required for the max. rotation of 5°. This means the required current is max. 35 mA at a required voltage of max. 12 V.

**Notes to the drawings on opposite page.**

1. The bulge at the frit seal may increase the indicated maximum dimensions by not more than 2 mm.
2. The coil is fixed to the envelope by means of adhesive tape.
3. The centre of the contact is situated within a square of 10 mm x 10 mm around the true geometrical position.
4. The length of the connecting leads of the rotation coil is min. 350 mm.