

DEVELOPMENT SAMPLE DATA

This information is derived from development samples made available for evaluation. It does not form part of our data handbook system and does not necessarily imply that the device will go into production

D14-290GH

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.

QUICK REFERENCE DATA

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

SCREEN

Metal-backed phosphor

	colour	persistence
D14-290GH	green	medium short

Useful screen dimensions	≥	100 x 80 mm ²
Useful scan		
horizontal	≥	100 mm
vertical	≥	80 mm
Spot eccentricity in horizontal and vertical directions	≤	6,5 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

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. 1050 g

Base

14 pin, all glass

blue binder, tab 4



PHILIPS

January 1978

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Dimensions and connections

See also outline drawing

Overall length	≤	343 mm
Face dimensions	≤	100 x 120 mm ²

Accessories

Socket, supplied with tube	type 55566
Mu-metal shield	type 55592
Final accelerator contact connector	type 55569 <i>small ball</i>

Je dec (J1-25)

FOCUSING

electrostatic

DEFLECTION

double electrostatic

x-plates

symmetrical

y-plates

symmetrical

Angle between x and y-traces

90 ± 1°

Angle between x-trace and horizontal axis of the face

≤ 5° *

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 ₁ to all other elements except x ₂	C _{x1(x2)}	7 pF
x ₂ to all other elements except x ₁	C _{x2(x1)}	7 pF
y ₁ to all other elements except y ₂	C _{y1(y2)}	4 pF
y ₂ to all other elements except y ₁	C _{y2(y1)}	4 pF
x ₁ to x ₂	C _{x1x2}	2,2 pF
y ₁ to y ₂	C _{y1y2}	1,3 pF
Control grid to all other elements	C _{g1}	6 pF
Cathode to all other elements	C _k	4,5 pF

A

* 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 400 Ω. Under typical operating conditions, max. 30 ampere-turns are required for the max. rotation of 5°. This means the required current is max. 30 mA at a required voltage of 12 V. *max*

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.

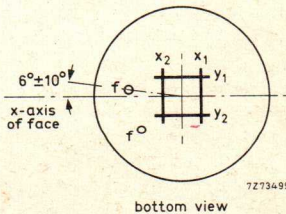
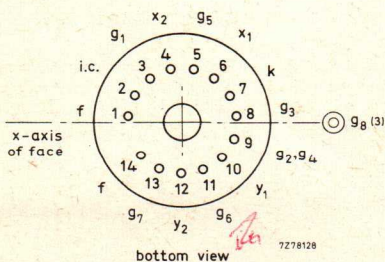
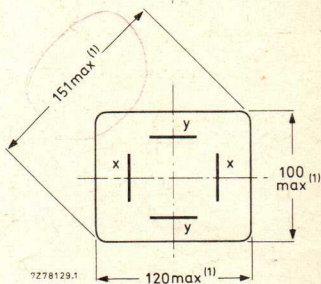
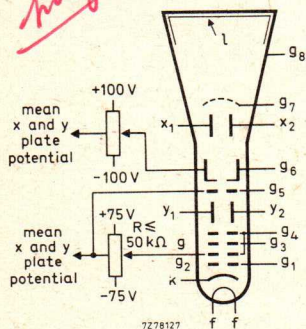
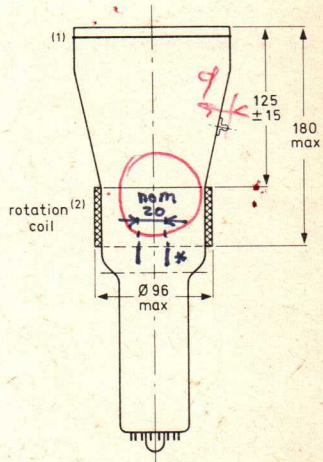
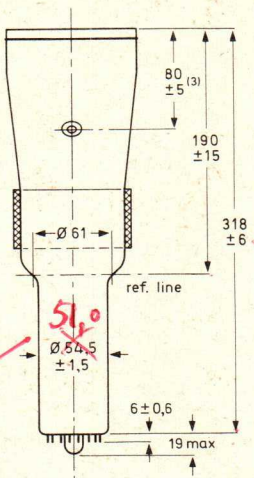


DIMENSIONS AND CONNECTIONS

For notes to the drawings see bottom of opposite page.

DEVELOPMENT SAMPLE DATA

*Spool with
hoogte max 51,20*



** Coil leads with a length of 350 mm min.*

