

INSTRUMENT CATHODE-RAY TUBE

10 cm diameter flat faced monoaccelerator oscilloscope tube primarily intended for use in inexpensive oscilloscopes and read-out devices.

QUICK REFERENCE DATA		
Accelerator voltage	$V_{g2, g4, g5(l)}$	1500 V
Display area		80 x 60 mm ²
Deflection coefficient, horizontal	M_x	32 V/cm
vertical	M_y	13.7 V/cm

SCREEN

	colour	persistence
D10-160GH	green	medium short
D10-160GM	yellowish green	long
D10-160GP	bluish green	medium short

Useful screen diameter min. 85 mm

Useful scan

horizontal min. 80 mm

vertical min. 60 mm

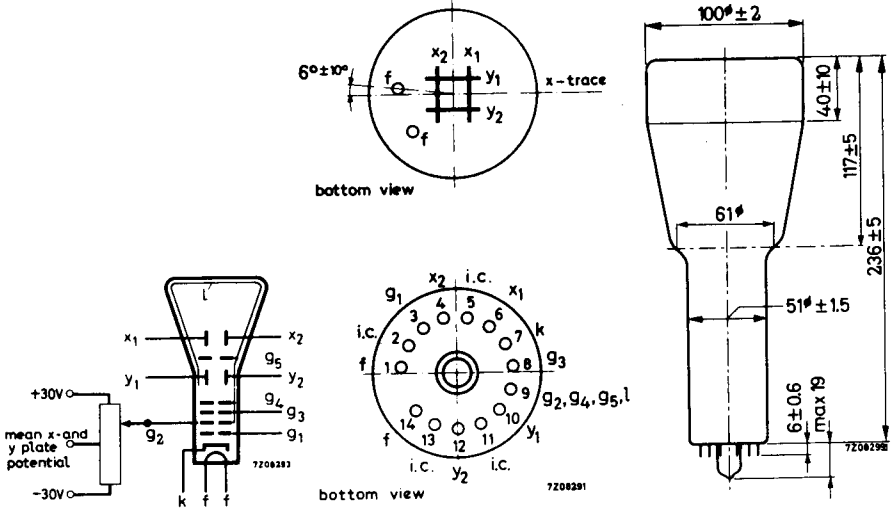
The useful scan may be shifted vertically to a max. of 5 mm with respect to the geometric centre of the faceplate.

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 max. 260 mm
 Face diameter max. 102 mm

Base 14 pin all glass

Net weight approx. 400 g

Accessories

Socket (supplied with tube) type 55566

Mu metal shield type 55547

TYPICAL OPERATING CONDITIONS³⁾

Accelerator voltage	$V_{g2, g4, g5, \ell}$	max. 1500 V
Astigmatism control voltage	$\Delta V_{g2, g4, g5, \ell}$	± 30 V ¹⁾
Focusing electrode voltage	V_{g3}	140 to 275 V
Control grid voltage for visual extinction of focused spot	V_{g1}	max. -50 V
Grid drive for 10 μ A screen current		approx. 10 V
Deflection coefficient, horizontal	M_x	32 V/cm
		max. 34 V/cm
vertical	M_y	13.7 V/cm
		max. 14.5 V/cm
Deviation of linearity of deflection		max. 1 % ²⁾
Geometry distortion		see note 4
Useful scan, horizontal		min. 80 mm
vertical		min. 60 mm

LIMITING VALUES (Absolute max. rating system)

Accelerator voltage	$V_{g2, g4, g5, \ell}$	max. 2200 V
		min. 1350 V
Focusing electrode voltage	V_{g3}	max. 2200 V
Control grid voltage, negative	$-V_{g1}$	max. 200 V
		min. 0 V
Cathode to heater voltage	V_{kf}	max. 125 V
		$-V_{kf}$
Grid drive, average		max. 20 V
Screen dissipation	W_{ℓ}	max. 3 mW/cm ²

1) All that will be necessary when putting the tube into operation is to adjust the astigmatism control voltage once for optimum spot shape in the screen centre. The control voltage will always be in the range stated, provided the mean x plate and certainly the mean y plate potential was made equal to $V_{g2, g4, g5, \ell}$ with zero astigmatism correction.

2) The sensitivity at a deflection of less than 75% of the useful scan will not differ from the sensitivity at a deflection of 25% of the useful scan by more than the indicated value.

3) The mean x and certainly the mean y plate potentials should be equal to $V_{g2, g4, g5, \ell}$ with astigmatism adjustment set to zero.

4) A graticule, consisting of concentric rectangles of 50 mm x 60 mm and 49 mm x 58.6 mm is aligned with the electrical x-axis of the tube. The edges of a raster will fall between these rectangles.

PHILIPS

Data handbook



Electronic
components
and materials

D10-160GH D10-160GM D10-160GP

page	sheet	date
1	1	1969.01
2	2	1970.02
3	3	1969.01
4	4	1972.01
5	FP	2000.12.11