

DEVELOPMENT SAMPLE DATA

This information is derived from development samples made available for evaluation. It does not necessarily imply that the device will go into regular production.

L14-140GH/95

INSTRUMENT CATHODE-RAY TUBE

14 cm diagonal, rectangular flat-faced direct-view charge transfer storage tube with internal graticule. The tube has vertical scan-magnification with 3 quadrupole lenses and is for wide-band (100 MHz) oscilloscopy with fast store mode and variable persistence.

QUICK REFERENCE DATA

Final accelerator voltage	$V_{g13(l)}$	10 kV
Screen dimensions (10 x 8 divisions of 9 mm ²)		90 x 72 mm ²
Deflection coefficient		
horizontal	M_x	18,5 V/div ←
vertical	M_y	4,8 V/div
Writing speed		1 div/ns

OPTICAL DATA

blue binder, tab 4

Screen type	metal backed phosphor
persistence, non-store mode	GH, colour green
persistence, store mode	medium-short
	variable
Useful screen dimensions	min. 90 x 72 mm
Useful scan	
horizontal	min. 90 mm
vertical	min. 72 mm
Spot eccentricity	
in horizontal	max. 6 mm
in vertical directions	max. 8 mm

HEATING

Writing section

Indirect by a.c. or d.c.; parallel supply		
Heater voltage	V_f	6,3 V
Heater current	I_f	240 mA

Viewing section

Indirect by d.c.; parallel supply		
Heater voltage	$V_{f'}, V_{f''}$	12,6 V
Heater current	$I_{f'}, I_{f''}$	240 mA



PHILIPS

June 1981

MECHANICAL DATA**Mounting position**

The tube can be mounted in any position. It should not be supported by the base alone and under no circumstances should the socket be allowed to support the tube. The tags near the screen should not be subjected to mechanical stress. Avoid any force on the side contacts.

Net mass approx. 1,3 kg

Base 14 pin, all glass

Dimensions and connections

See also outline drawing, pages 4 and 5

Overall length (socket included) max. 454 mm

Face dimensions max. 100 x 120 mm

Accessories

Socket (supplied with tube) type 55572

Side contact connector (8 required) type 55561

FOCUSING electrostatic note 1

DEFLECTION double electrostatic

x-plates symmetrical

y-plates symmetrical

Angle between x and y-traces $90 \pm 1^\circ$

→ Angle between y-trace and y-axis of the internal graticule $\leq 5^\circ$ note 2

NOTES

1. Because of the use of a quadrupole lens for the magnification of the vertical deflection, two more quadrupole lenses are used for focusing. Therefore, controls for two voltages have to be provided.

→ 2. The tube has a rotation coil, concentrically wound around the tube neck, to allow alignment of the y-trace with the mechanical y-axis of the screen. The coil has 2000 turns and a maximum resistance of 650Ω . Under typical operating conditions, a maximum of 30 ampere-turns is required for the maximum rotation of 5° . This means the required supply is 15 mA maximum at 12 V maximum.

Fast-store mode

For erasure in the fast mode the front mesh has to be erased first in the same way as in the variable persistence mode but separate adjustments should be foreseen.

The fast mesh is to be prepared by reducing V_{g11} from 140 V to the stabilizing level (0 to max. 20 V) during the erasing pulse on the front mesh.

After writing, at the end of the unblanking pulse, a transfer pulse (500 V, 100 ms) is to be applied on the front mesh.

During the transfer pulse, V_{g11} is further reduced about 1 V for enhanced transmission during transfer. This reduction has to be carefully adjusted for optimum contrast and writing speed.

During the whole cycle, FGA, V_{g9-1} and V_{g9-3} may be increased for more viewing gun current. Details on the adjustment procedure and the voltage range to be provided for can be made available.

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