



ELECTRONIC TUBE REFERENCE

L14140GH95

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Fourteen-centimeter Philips instrument CRT with electrostatic focusing and deflection, intended for precision oscilloscope/display service with documented storage/display, capacitance, operating-voltage, and deflection characteristics.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 240 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Cathode Ray*No fixed ratings recorded.**14 cm instrument cathode-ray tube*

14 cm instrument cathode-ray tube. The supplied Philips sheet specifies electrostatic focusing and deflection, storage/display characteristics, heater data, capacitances, operating voltages, deflection coefficients, and limiting values.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS E-Z

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
INSTRUMENT CATHODE-RAY TUBE	14 cm	—
Final accelerator voltage Vg13(%)	10 kV	—
Minimum useful scan area [1]	90 mm	—
Minimum useful scan area [2]	72 mm	—
horizontal My	18.6 V	—
vertical My	4.8 V	—
Useful screen area min [1]	90 mm	—
Useful screen area min [2]	72 mm	—
Useful scan area min [1]	90 mm	—
Useful scan area min [2]	72 mm	—
in horizontal direction max	6 mm	—
in vertical direction max	8 mm	—
Heater voltage V _h	63 V	—
Heater current I _h	240 mA	—
current at equilibrium conditions approx	5 s	—
Heater voltage V _{EGE}	126 V	—
Heater current I _{EGf}	240 mA	—
Net mass approx	1.3 kg	—
Overall length {socket included) max	454 mm	—
Faceplate dimensions 118+	0.5 mm	—
@9 _@69_ 4 40+	5 s	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
coil	421 %	—
dimensions by not more than	3 mm	—
(2) Minimum length of cable	350 mm	—
[ZIETCIRI 2 FGK sub-division	1.6 mm	—
line width	0.2 mm	—
dot diameter	0.4 mm	—
c3 Vo3 [1]	65 V	—
c3 Vo3 [2]	65 V	—
c2 Vg9-2 ~ [1]	65 V	—
c2 Vg9-2 ~ [2]	65 V	—
c1 go-1	30 V	—
First accelerator voltage (d.c.) VEGA [1]	2 V	—
First accelerator voltage (d.c.) VEGA [2]	2 V	—
Deflection coefficient typ	18.56 V	—
max	20.5 V	—
typ	4.8 V	—
vertical max	55 V	—
Grid drive for [1]	10 μ A	—
Grid drive for [2]	20 V	—
Grid drive for specified writing speed Vg max	80 V	—
Line width at the centre of the screen lL.w	0.4 mm	—
max. write	2.5 div/ μ s	—
just black	60 s	—
max. write: =2	16 s	—
capable of supplying	0.5 mA	—
151020 M2	500 pF	—
6. A graticule, consisting of concentric rectangles of [1]	90 mm	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
6. A graticule, consisting of concentric rectangles of [2]	72 mm	—
6. A graticule, consisting of concentric rectangles of [3]	87.8 mm	—
6. A graticule, consisting of concentric rectangles of [4]	70.5 mm	—
conditions, adjusted for optimum spot size at a beam current	10 μ A	—
minimum screen area, except the outmost	3 mm	—
Screen voltage 913()) min	5500 V	—
Bacflz:g ;::cs::rode voltage (d.c.) v max	600 V	—
912 min. —	50 V	—
v max	200 V	—
fast mesh g11 min	50 V	—
max	200 V	—
Collector mesh voltage {d.c./a.c.) Vg'10 min	100 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
maximum rotation of 50, This means the required supply is [1]	15 mA	—
maximum rotation of 50, This means the required supply is [2]	12 V	—
first accelerator FGA) Val3() [1]	7000 V	—
first accelerator FGA) Val3() [2]	7000 V	—
front mesh Vg12 —	50 V	—
fast mesh Vg11 [1]	140 V	—
fast mesh Vg11 [2]	140 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Collector mesh voltage (d.c.) Vg10 [1]	130 V	—
Collector mesh voltage (d.c.) Vg10 [2]	130 V	—
max	10500 V	—
Final accelerator voltage Vg13() min	8500 V	—
{with respect to g2) g8 min. —	500 V	—
Scan magnifier electrode voltage Vv max	550 V	—
{with respect to g3) g7 min	700 V	—
(with respect to g2) g6 min. —	500 V	—
Vertical focusing electrode voltage V. max. —	750 V	—
{with respect to gp) 95 min. —	1200 V	—
Horizontal focusing electrode voltage v max. -~	1200 V	—
{with respect to gg) g3 min. ~	1800 V	—
et . max	3500 V	—
First accelerator voltage Vg2 min	2500 V	—
positive Vit max	1256 V	—
negative Vi max	125 V	—
Grid drive, averaged over [1]	1 ms	—
Grid drive, averaged over [2]	30 V	—
V max	7500 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
x1 to all other elements except x2 Cx1(x2)	5.5 pF	—
x2 to all other elements except x1 Cx2(x1)	55 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
y1 to all other elements except y0 Cy1(y2)	2.7 pF	—
y2 to all other elements except y1 Cy2(y1)	2.7 pF	—
yltoy Cyly2	1.7 pF	—
gl2 to all other elements Cq12	70 pF	—
gi3to all other elements Cq13	85 pF	—
g3 to all other elements Cgg	17 pF	—
gs to all other elements Cg5	17 pF	—
gg-1 to all other elements Cg9-1	30 pF	—
g9.2 to all other elements Cq9-2	70 pF	—
gg-3 lo all other elements C49-3	60 pF	—
FGA to all other elements CrGA	20 pF	—
k"	12 pF	—