



ELECTRONIC TUBE REFERENCE

D1315BE

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Philips high-sensitivity metal-backed oscilloscope CRT with helical post-deflection acceleration. Its electrostatic beam system combines sensitive deflection with increased brightness for precision instrumentation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	DIHEPTAL 12 P	BASE PINS	12
NOMINAL HEATER	6.3 V / 300 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.**Electrostatic deflection, accelerator/focus/grid voltages, sensitivities and limiting values reviewed.*

D1315BE is a Philips high-sensitivity metal-backed oscilloscope CRT with helical post-deflection acceleration. The supplied datasheet provides electrostatic-deflection, focusing, acceleration, screen and operating characteristics.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V2

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V2

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating
Screen fluorescence	Blue	Screen
Screen phosphorescence	Blue	Screen
Screen persistence	Medium short	Screen
Useful screen diameter	114 mm	Minimum
Useful horizontal scan	100 mm	Minimum
Useful vertical scan	60 mm	Minimum
Horizontal deflection factor	21 to 26 V/cm	OscilloscopeCRT
Vertical deflection factor	5.1 to 6.7 V/cm	OscilloscopeCRT

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Post-accelerator voltage	4000 V	OscilloscopeCRT
Isolation-shield voltage	2000 ± 200 V	OscilloscopeCRT
Deflection-plate shield voltage	2000 ± 100 V	OscilloscopeCRT
Second-accelerator voltage	2000 ± 100 V	OscilloscopeCRT
Focusing-electrode voltage	220 to 710 V	OscilloscopeCRT
First-accelerator voltage	2000 V	OscilloscopeCRT
Grid No.1 voltage	-60 to -96 V	OscilloscopeCRT
Maximum deflection-linearity deviation	2 %	OscilloscopeCRT

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful scan at V57/Vg4	2 a	Published datasheet specification
in the x direction oin.,	0 mm	Published datasheet specification
in the y direction min.,	0 mm	Published datasheet specification
Heater voltage Vp	6.3 V	Published datasheet specification
Heater current Ir	300 mA	Published datasheet specification
Grid No.1 to all other electrodes C _{aq}	6.4 pF	Published datasheet specification
Cathode to all other electrodes C _x	3.9 pF	Published datasheet specification
except x, plate C _{x1}	3 pF	Published datasheet specification
except x _{4y} plate C _{x2}	3 pF	Published datasheet specification
except y _p plate C _{y1}	2.8 pF	Published datasheet specification
except y, plate C _{y2}	2.8 pF	Published datasheet specification
Published specification	1	Published datasheet specification
Published specification	706	Published datasheet specification
Post accelerator voltage V67	4000 V	Published datasheet specification
Grid No.4 voltage V54	2000 V	Published datasheet specification
Grid No.2 voltage V52	2000 V	Published datasheet specification
Beam current I _b	10	Published datasheet specification
Line width l.w,	0.5 mm	Published datasheet specification
Post accelerator voltage V57	4000 V	Published datasheet specification
Isolation shield voltage VS6	2000	Published datasheet specification
Deflection plate shield voltage VSS	2000	Published datasheet specification

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Second accelerator voltage Vg4	2000	Published datasheet specification
Focusing electrode voltage Vgj	220	Published datasheet specification
First accelerator voltage Vg2	2000 V	Published datasheet specification
Grid No.1 voltage Vg;	-60	Published datasheet specification
horizontal My	21	Published datasheet specification
vertical My	5.1	Published datasheet specification
deflection	2	Published datasheet specification
Pattern distortion	1	Published datasheet specification
Undelected spot position R	5 mm	Published datasheet specification
Variation of the	6	Published datasheet specification
max.,	4	Published datasheet specification
The sensitivity for a deflection of less than	5	Published datasheet specification
sensitivity for a deflection of	5	Published datasheet specification
rectangle of	0	Published datasheet specification
will be within a concentric rectangle of	8	Published datasheet specification
Isolation shield voltage Vgé	2200 V	Published datasheet specification
voltage Vss	2200 V	Published datasheet specification
Focusing electrode voltage Vs.),	1500 V	Published datasheet specification
First accelerator voltage Vgz	2200 V	Published datasheet specification
negative ~Vgq	200 V	Published datasheet specification
peak positive +Vg4 p	2 V	Published datasheet specification
Ratio Vgo/Vgy Vg,/Vgy	1	Published datasheet specification
Ratio V57/Vg4 Vg7/Vg4	4	Published datasheet specification
tion plate Vg4-y p	5007 V	Published datasheet specification
cathode positive Vkf(kpos) max	0 V	Published datasheet specification
dissipation Wgo	6 W	Published datasheet specification

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen dissipation W_y	3 mW/cm²	Published datasheet specification
Focusing voltage V_{gs}	110	Published datasheet specification
Grid No.1 voltage °) $-V_g$;	30	Published datasheet specification
Deflection factors at V_{gp}/V_{gy}	2	Published datasheet specification
horizontal M_y	10.5	Published datasheet specification
vertical M_y	2.55	Published datasheet specification
resistance R_g ,	1.5	Published datasheet specification
resistance R_y	5	Published datasheet specification
Grid No.3 current I_{gs}	15	Published datasheet specification

TUBE TINKER

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