

ELECTRONIC TUBE REFERENCE

ML5310

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Philips radar cathode-ray tube with a metal-backed screen and magnetic focusing and deflection. Its large direct-view display is intended for radar indicator presentation and persistent target viewing.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray
No fixed ratings recorded. CRT-specific optical, focusing, deflection, accelerating-voltage, scan, capacitance, and safety data are retained in TUBE_SECTION_PARAMETER because the locked promoted fields primarily target conventional electrode sections.

Large round metal-backed radar cathode-ray tube in the Philips MF53-10/ML53-10 family with magnetic focusing and deflection.



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	CathodeRay
Heater current	300 mA	CathodeRay
Accelerator/anode voltage	15 kV	RadarCRT
Grid No.2 voltage	300 V	RadarCRT
Grid No.1 cutoff voltage minimum	30 V	RadarCRT
Grid No.1 cutoff voltage maximum	70 V	RadarCRT

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing	Magnetic	CathodeRay
Deflection	Double magnetic	CathodeRay
Screen color	Orange	CathodeRay
Screen persistence	Long	CathodeRay
Screen construction	Metal-backed	RadarCRT



1963 Philips Electron Tubes Handbook V3

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Cathode Ray

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen color	Orange	RadarCRT
Focusing	Magnetic	RadarCRT
Deflection	Magnetic	RadarCRT

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Light transmission	72 %	RadarCRT
Drive voltage at 100 uA beam current maximum	45 V	RadarCRT

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful screen diameter	490.5 mm	RadarCRT
Final accelerator voltage	25 kV	RadarCRT
Grid No.1 extinction voltage minimum	-120 V	RadarCRT
Grid No.1 extinction voltage maximum	-60 V	RadarCRT

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid capacitance	5 pF	Section1
Cathode capacitance	5 pF	Section1



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful screen diameter	490.5 mm	—
Deflection method	Magnetic	—
Focusing method	Magnetic	—
Screen construction	Metal-backed	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating anode voltage	25000 V	—
Maximum anode voltage	27000 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 capacitance	5 pF	—