



ELECTRONIC TUBE REFERENCE

21CEP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Large P4 monochrome television picture tube documented for high-voltage direct-view service, using magnetic deflection and manufacturer-specified focusing and beam-control arrangements for type 21CEP4.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	18000 V
<i>Published maximum ratings and electrical characteristics promoted from the approved source.</i>	

The Westinghouse 21CEP4 is a 21-inch 110-degree aluminized P4 CRT with low-voltage electrostatic focus and no ion trap.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	600 mA	Nominal
Maximum Plate Voltage	18000 V	—
UltorVoltageMaximum	18000 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
Heater Warm-up Time	11 s	—
Focusing Method	Low Voltage Electrostatic text	—
Deflection Method	Magnetic text	—
Horizontal Deflection Angle	105 deg	Approximate
Vertical Deflection Angle	87 deg	Approximate
Diagonal Deflection Angle	110 deg	Approximate

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Phosphor	Aluminized P4 text	—
Fluorescence	White text	—
Persistence	Short to Medium text	—
Light Transmittance	73 percent	Approximate
Cathode-to-All Capacitance	5 pF	Approximate
Grid1-to-All Capacitance	6 pF	Approximate
External Coating-to-Anode Capacitance Minimum	2000 pF	—
External Coating-to-Anode Capacitance Maximum	2500 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Voltage	18000 V	—
Minimum Anode Voltage	11000 V	—
Maximum Focus Electrode Voltage Positive	1100 V	Grid4
Maximum Focus Electrode Voltage Negative	-550 V	Grid4
Maximum Grid2 Voltage	500 V	—
Minimum Grid2 Voltage	200 V	—
Maximum Heater-Cathode Voltage During Warmup	450 V	Duration<=15s
Maximum Heater-Cathode Voltage After Warmup	180 V	—
Typical Anode Voltage	14000 V	CathodeDrive
Typical Focus Voltage Minimum	0 V	Grid4
Typical Focus Voltage Maximum	400 V	Grid4
Typical Grid2 Voltage	300 V	CathodeDrive
Cathode Voltage for Raster Cutoff Minimum	28 V	CathodeDrive
Cathode Voltage for Raster Cutoff Maximum	72 V	CathodeDrive
Maximum Grid1 Circuit Resistance	1.5 Mohm	—