

Twenty-one-inch direct-view television picture tube with low-voltage electrostatic focus, magnetic deflection, external single-field ion trap, and white P4 medium-persistence screen. Approximately 70-degree deflection supports conventional monochrome receiver construction.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12M	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	16000 V
MAXIMUM SCREEN VOLTAGE	500 V
Maximum anode voltage mapped to MaxPlateVoltage; CRT grid/focusing limits retained as parameters rather than mis-promoted as ordinary screen-grid data.	

Direct-view television picture tube with low-voltage electrostatic focus, magnetic deflection, external single-field ion trap, and P4 white phosphor.



SOURCE OPERATING CONDITIONS

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1961 Tung Sol

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1961 TUNG SOL

Section 1 · Cathode Ray

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HighVoltageAnodeMaximum	20000 V	CRT

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
CathodeToOtherElectrodesCapacitance	5 pF	Approximate



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1966 Tung Sol Electronic Tubes 4 of 4

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1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Cathode Ray

CONSTRUCTION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing method	LowVoltageElectrostatic	—
Deflecting method	Magnetic	—
Phosphor	P4	White;MediumPersistence

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection angle	70 deg	Approximate
Faceplate light transmission at center	66 %	Approximate

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Maximum DC anode voltage	26000 V	—
Maximum DC grid #2 voltage	500 V	—
Maximum grid #1 negative-bias magnitude	125 V	—
Maximum grid #1 positive DC voltage	0 V	—
Maximum grid #1 positive peak voltage	2 V	—
Typical DC anode voltage	14000 V	TelevisionPictureTube
Typical DC grid #2 voltage	300 V	TelevisionPictureTube
Typical grid #1 voltage minimum	-77 V	VisualExtinctionRange
Typical grid #1 voltage maximum	-33 V	VisualExtinctionRange
Maximum grid #1 circuit resistance	1.5 megohm	—
Ion trap magnet rated strength	45 gauss	Approximate
Focusing electrode voltage minimum	-55 V	ElectrostaticFocus
Focusing electrode voltage maximum	300 V	ElectrostaticFocus

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode-to-all-other-electrodes capacitance	5 pF	Approximate
Grid #1-to-all-other-electrodes capacitance	6 pF	Approximate

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Direct-view television picture tube	—



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1968 General Electric Co

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1968 GENERAL ELECTRIC CO

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Voltage	16000 V	—
Maximum Grid No. 2 Voltage	500 V	—
Anode Voltage	14000 V	Typical
Heater Voltage	6.3 V	—
Heater Current	600 mA	—



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1971 RCA HB3 Binder 1 of 7

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1971 RCA HB3 BINDER 1 OF 7

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum grid 2 voltage	500 V	—
Maximum grid 1 negative-bias voltage	125 V	NegativeBias
Maximum grid 1 positive-bias voltage	0 V	PositiveBias
Maximum grid 1 positive-peak voltage	2 V	PositivePeak
Peak heater-cathode voltage	180 V	HeaterPositive

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diagonal deflection angle	70 deg	Approximate
Horizontal deflection angle	66 deg	Approximate
Vertical deflection angle	50 deg	Approximate

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