



SYLVANIA

engineering data service

21CSP4

ADVANCE DATA
CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angles (approx.)	
Horizontal	105 Degrees
Diagonal	110 Degrees
Vertical	87 Degrees
Phosphor	Aluminized P4
Fluorescence	White
Persistence	Short to Medium
Faceplate	Gray Filter Glass
Light Transmittance (approx.)	75 Percent

ELECTRICAL DATA

Heater Voltage	6.3	Volts
Heater Current	0.450 $\pm$ 5%	Ampere
Heater Warm-up Time ¹	11	Seconds
Direct Interelectrode Capacitances (approx.)		
Cathode to All Other Electrodes	5	μ mf
Grid No. 1 to All Other Electrodes	6	μ mf
External Conductive Coating to Anode ²	2500	μ mf Max.
	2000	μ mf Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)	19 1/16 x 15 1/16	Inches
Minimum Useful Screen Area	262	Sq. Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Bulb	J171-C1 or equivalent	
Base	B6-185	
Basing	7FA	
Weight (approx.)	20	Pounds

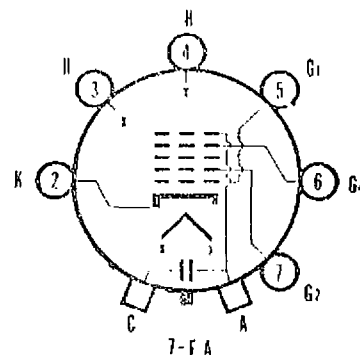
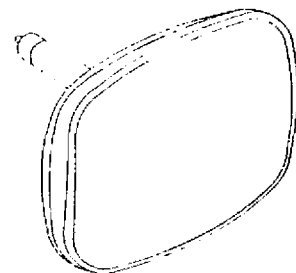
RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	19,800	Volts	dc
Grid No. 4 Voltage (Focusing Electrode)	-550 to +1100	Volts	dc
Grid No. 2 Voltage	550	Volts	dc
Grid No. 1 Voltage			
Negative Bias Value	154	Volts	dc
Negative Peak Value	220	Volts	
Positive Bias Value	0	Volts	dc
Positive Peak Value	2	Volts	

QUICK REFERENCE DATA

Television Picture Tube
21" Direct Viewed
Rectangular Glass Type
Lightweight Tube
Spherical Faceplate
Gray Filter Glass
Aluminized Screen
Electrostatic Focus
110° Magnetic Deflection
1 1/8" Neck Diameter
No Ion Trap
External Conductive Coating
6.3 Volt, 450 Ma Heater

SYLVANIA ELECTRIC
PRODUCTS INC.TELEVISION PICTURE TUBE
DIVISION

SENECA FALLS, NEW YORK

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MAXIMUM RATINGS (Absolute Maximum Values) (Cont'd.)

Peak Heater-Cathode Voltage

Heater Negative with Respect to Cathode

During Warm-up Period not to Exceed 15 Seconds

450 Volts

After Equipment Warm-up Period

200 Volts

Heater Positive with Respect to Cathode

200 Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage

14,000 Volts dc

Grid No. 4 Voltage for Focus

0 to 400 Volts dc

Grid No. 2 Voltage

300 Volts dc

Grid No. 1 Voltage Required for Cutoff ³

-35 to -72 Volts dc

CIRCUIT VALUES

Grid No. 1 Circuit Resistance

1.5 Megohms Max.

NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. External conductive coating must be grounded.
3. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more negative.

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.



1. Reference line is determined by plane C-C' of JETEC No. 126 Reference Line Gauge when the gauge is seated against the bulb.
2. Base pin No. 7 aligns with anode contact (J1-21) within 30°.
3. Dimensions are in inches.

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