

### CHARACTERISTICS

#### GENERAL DATA

Focusing Method . . . . .	Electrostatic
Deflection Method . . . . .	Magnetic
Deflection Angles (Approx.)	
Horizontal . . . . .	99 Degrees
Diagonal . . . . .	110 Degrees
Vertical . . . . .	82 Degrees
Phosphor . . . . .	Aluminized P4
Fluorescence . . . . .	White
Persistence . . . . .	Short to Medium
Faceplate . . . . .	Bonded Shield
(Gray Filter Glass Safety Plate Laminated Directly to Face of Tube)	
Light Transmittance of Faceplate Assembly (Approx.) . . . . .	40 Percent

#### ELECTRICAL DATA

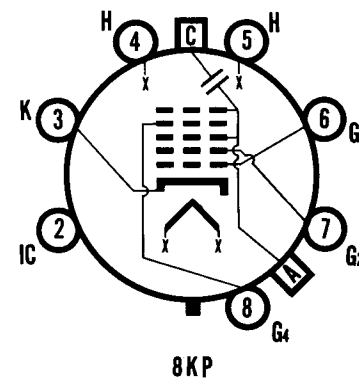
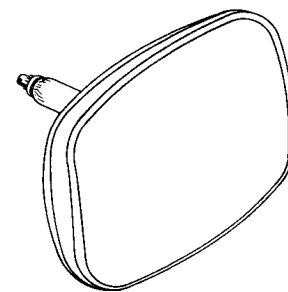
Heater Voltage . . . . .	6.3 Volts
Heater Current . . . . .	0.60 ± 5% Ampere
Heater Warm-up Time <sup>1</sup> . . . . .	11 Seconds
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes . . . . .	5 μmf
Grid No. 1 to All Other Electrodes . . . . .	6 μmf
External Conductive Coating to Anode <sup>2</sup> . . . . .	2500 μmf
	1700 μmf
	Max.
	Min.

#### MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)	
Height . . . . .	15¼ Inches
Width . . . . .	19 <sup>5</sup> / <sub>16</sub> Inches
Diagonal . . . . .	22 <sup>5</sup> / <sub>16</sub> Inches
Area . . . . .	282 Sq. Inches
Neck Length . . . . .	5½ Inches
Overall Length . . . . .	15 <sup>3</sup> / <sub>16</sub> Inches
Bulb . . . . .	J187A or Equivalent
Safety Plate . . . . .	FP198A or Equivalent
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base . . . . .	B7-219
Basing . . . . .	8KP
Weight (Approx) . . . . .	32½ Pounds

### QUICK REFERENCE DATA

Television Picture Tube  
 23" Direct Viewed  
 Rectangular Glass Type  
 Spherical Faceplate  
 Bonded Shield  
 Gray Filter Glass  
 Aluminized Screen  
 Neck Length 5½"  
 Electrostatic Focus  
 110° Magnetic Deflection  
 No Ion Trap  
 External Conductive Coating



### RATINGS

#### MAXIMUM RATINGS (Design Maximum Values)

##### Cathode Drive Service<sup>3</sup>

Maximum Anode Voltage . . . . .	22,000 Volts	dc
Minimum Anode Voltage . . . . .	13,200 Volts	dc
Grid No. 3 Voltage (Focusing Electrode) . . . . .	-550 to +1100 Volts	dc
Grid No. 2 Voltage . . . . .	70 Volts	dc
Cathode Voltage		
Positive Bias Value . . . . .	154 Volts	dc
Positive Peak Value . . . . .	220 Volts	
Negative Bias Value . . . . .	0 Volts	dc
Negative Peak Value . . . . .	2 Volts	

### SYLVANIA ELECTRONIC TUBES

A Division of  
Sylvania Electric Products Inc.

#### PICTURE TUBE OPERATIONS SENECA FALLS, NEW YORK

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PAGE 1 OF 3

File Under

TELEVISION PICTURE TUBES

**MAXIMUM RATINGS (Design Maximum Values) Cathode Drive Service<sup>3</sup> (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 (Cathode Drive Service)<sup>3</sup>**

Anode Voltage . . . . .	16,000 Volts	dc
Grid No. 3 Voltage for Focus . . . . .	0 to +400 Volts	dc
Grid No. 2 Voltage <sup>3</sup> . . . . .	50 Volts	dc
Cathode Voltage Required for Cutoff <sup>4</sup> . . . . .	+32 to +47 Volts	dc

**CIRCUIT VALUES**

Grid No. 1 Circuit Resistance . . . . .	1.5 Megohms Max.
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**NOTES:**

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage 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 the rated heater voltage divided by the rated heater current.
2. External conductive coating must be grounded.
3. Voltages are positive with respect to Grid No. 1 unless indicated otherwise.
4. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more positive.

**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.*

