

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angles (Approx.)	
Horizontal	102 Degrees
Diagonal	114 Degrees
Vertical	86 Degrees
Phosphor	Aluminized P4
Fluorescence	White
Persistence	Medium Short
Faceplate	Bonded Shield
(Gray Filter Glass Safety Plate Laminated Directly to Face of Tube)	
Light Transmittance of Faceplate Assembly (Approx.)	44 Percent

ELECTRICAL DATA

Heater Voltage	6.3 Volts	
Heater Current	$0.45 \pm 5\%$ Ampere	
Heater Warm-up Time ¹	11 Seconds	
Direct Interelectrode Capacitances (Approx.)		
Cathode to All Other Electrodes	5 pf	
Grid No. 1 to All Other Electrodes	6 pf	
External Conductive Coating to Anode ²	2100 pf	Max.
	1700 pf	Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)	
Height	12 $\frac{1}{16}$ Inches
Width	15 $\frac{1}{4}$ Inches
Diagonal	17 $\frac{5}{8}$ Inches
Area	172 Sq. Inches
Neck Length	4 $\frac{1}{8} \pm \frac{1}{8}$ Inches
Overall Length	11 $\frac{5}{8} \pm \frac{5}{16}$ Inches
Bulb	J149C
Safety Plate	FP159A
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base	B7-208
Basing	8HR
Weight (Approx.)	18 $\frac{1}{2}$ Pounds

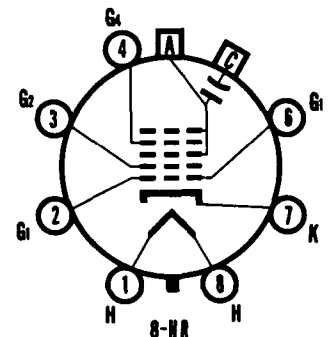
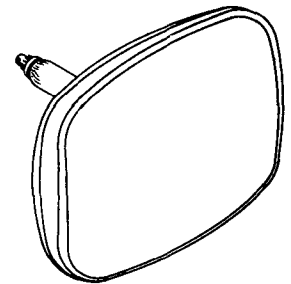
RATINGS

MAXIMUM RATINGS (Design Maximum Values)

Cathode Drive Service ³		
Maximum Anode Voltage	23,000 Volts	dc
Minimum Anode Voltage	15,000 Volts	dc
Grid No. 4 Voltage (Focusing Electrode)	-400 to +1250 Volts	dc
Grid No. 2 Voltage	70 Volts	dc
Cathode Voltage		
Positive Bias Value	100 Volts	dc
Positive Peak Value	150 Volts	
Negative Bias Value	0 Volt	
Negative Peak Value	2 Volts	dc
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	

QUICK REFERENCE DATA

Television Picture Tube
 19" Direct Viewed
 Rectangular Glass Type
 Bonded Shield
 Gray Filter Glass
 Aluminized Screen
 Neck Length 4 $\frac{1}{8}$ "
 Electrostatic Focus
 114° Magnetic Deflection
 No Ion Trap
 External Conductive Coating
 6.3 Volt, 450 Ma Heater
 Low Grid No. 2 Voltage



SYLVANIA ELECTRONIC TUBES

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PICTURE TUBE OPERATIONS

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File Under

TELEVISION PICTURE TUBES

TYPICAL OPERATING CONDITIONS

Cathode Drive Service ³		
Anode Voltage	16,000 Volts	dc
Grid No. 4 Voltage for Focus	0 to +400 Volts	dc
Grid No. 2 Voltage ³	50 Volts	dc
Cathode Voltage Required for Cutoff ⁴	+32 to +50 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.



1. Reference line is determined by plane C-C' of JEDEC No. 126 Reference line Gauge, when the gauge is seated against the bulb.
2. Base Pin No. 4 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.
3. Planes perpendicular to tube axis and passing through points X, Y and Z are located as follows:
 Plane tangent to crown of face to plane of X: 0.500" Nominal
 Plane of X to plane of Y = .421" ± .025"
 Plane of X to plane of Z = .738" ± .045"