

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angles (Approx.)	
Horizontal	101 Degrees
Diagonal	114 Degrees
Vertical	86 Degrees
Phosphor	Aluminized P4
Fluorescence	White
Persistence	Medium Short
Faceplate	Gray Filter Glass
Light Transmittance (Approx.)	78 Percent

ELECTRICAL DATA

Heater Voltage	6.3 Volts	
Heater Current	$0.60 \pm 5\%$ 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	1500 pf	Max.
	1000 pf	Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)	
Height	12 Inches
Width	$15\frac{1}{8}$ Inches
Diagonal	$17\frac{9}{16}$ Inches
Minimum Useful Screen Area	172 Sq. Inches
Neck Length	$4\frac{3}{8} \pm \frac{1}{8}$ Inches
Overall Length	$11\frac{5}{8} \pm \frac{1}{4}$ Inches
Bulb	J149A
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base	B7-208
Basing	8HR
Weight (Approx.)	13 $\frac{1}{2}$ Pounds

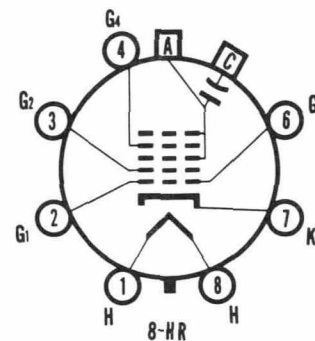
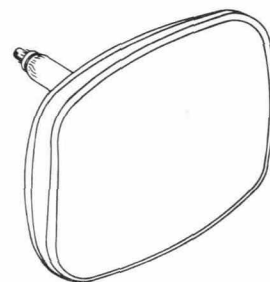
RATINGS

MAXIMUM RATINGS (Design Maximum Values)

Cathode Drive Service ³		
Maximum Anode Voltage	20,000 Volts	dc
Minimum Anode Voltage	10,000 Volts	dc
Grid No. 4 Voltage		
(Focusing Electrode)	-400 to +1250 Volts	dc
Maximum Grid No. 2 Voltage	70 Volts	dc
Minimum Grid No. 2 Voltage	40 Volts	dc
Cathode Voltage		
Positive Bias Value	100 Volts	dc
Positive Peak Value	150 Volts	
Negative Bias Value	0 Volt	dc
Negative Peak Value	2 Volts	
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
 Spherical Faceplate
 Gray Filter Glass
 Aluminized Screen
 Electrostatic Focus
 114° Magnetic Deflection
 1 $\frac{1}{8}$ " Neck Diameter
 No Ion Trap
 External Conductive Coating
 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 Service³

Anode Voltage	16,000 Volts	dc
Grid No. 4 Voltage for Focus	0 to 400 Volts	dc
Grid No. 2 Voltage	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 heater current.
2. External conductive coating must be grounded.
3. Voltages are positive with respect to Grid 1 unless indicated otherwise.
4. Visual extinction of focused raster. For cutoff of the undeflected focused spot, the absolute value of the bias between cathode and grid will increase by about 5 volts.

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.

D63035

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.