

ADVANCE DATA

CHARACTERISTICS

GENERAL DATA

Focusing Method	Tri-Potential 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	
Gray Filter Glass Safety Plate Laminated Directly to Face of Tube		
Light Transmittance of Faceplate Assembly (approx.)	40	Percent
Safety Plate Surface Frosted to Reduce Specular Reflection		

ELECTRICAL DATA

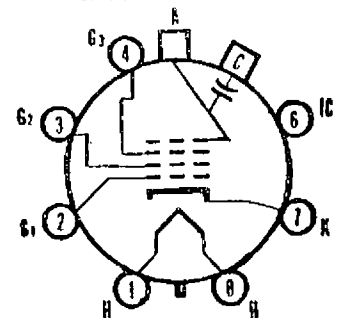
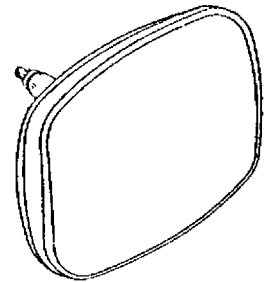
Heater Voltage	6.3	Volts
Heater Current	0.60 ± 5%	Ampere
Heater Warm-up Time ¹	11	Seconds
Direct Interelectrode Capacitances (approx.)		
Cathode to All Other Electrodes	5	µf
Grid No. 1 to All Other Electrodes	6	µf
External Conductive Coating to Anode ²	2000	µf Max.
	1500	µf Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)		
Height	15 1/16	Inches
Width	19 1/16	Inches
Diagonal	20 1/4	Inches
Area	262	Sq. Inches
Neck Length	3 9/16 ± 1/8	Inches
Overall Length	12 13/16 ± 7/16	Inches
Bulb	J171H or J171J	
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Base	B7-208	
Basing	8JR	
Weight (approx.)	27	Pounds

QUICK REFERENCE DATA

Television Picture Tube
 21" Direct Viewed
 Rectangular Glass Type
 Spherical Faceplate
 Integral Safety Plate
 Gray Filter Glass
 Frosted Face
 Aluminized Screen
 Tri-Potential
 Electrostatic Focus
 110° Magnetic Deflection
 No Ion Trap
 External Conductive Coating
 Short Neck



8JR

SYLVANIA ELECTRONIC TUBES

A Division of
 Sylvania Electric Products, Inc.
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 SENECA FALLS, NEW YORK

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RATINGS

MAXIMUM RATINGS (Design Maximum Values) Grid Drive Service

Anode Voltage	20,000	Volts	dc
Grid No. 3 Voltage (Focusing Electrode)	700	Volts	dc
Grid No. 2 Voltage	600 - 700	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	
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 (Grid Drive Service)

Anode Voltage	16,000	Volts	dc
Grid No. 3 Voltage for Focus	0 to +400	Volts	dc
Grid No. 2 Voltage ³	500	Volts	dc
Grid No. 1 Voltage Required for Cutoff ⁴	-43 to -72	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. Brightness and resolution improve with increase in Grid No. 2 voltage. A minimum value of 400 volts is recommended.
4. 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.

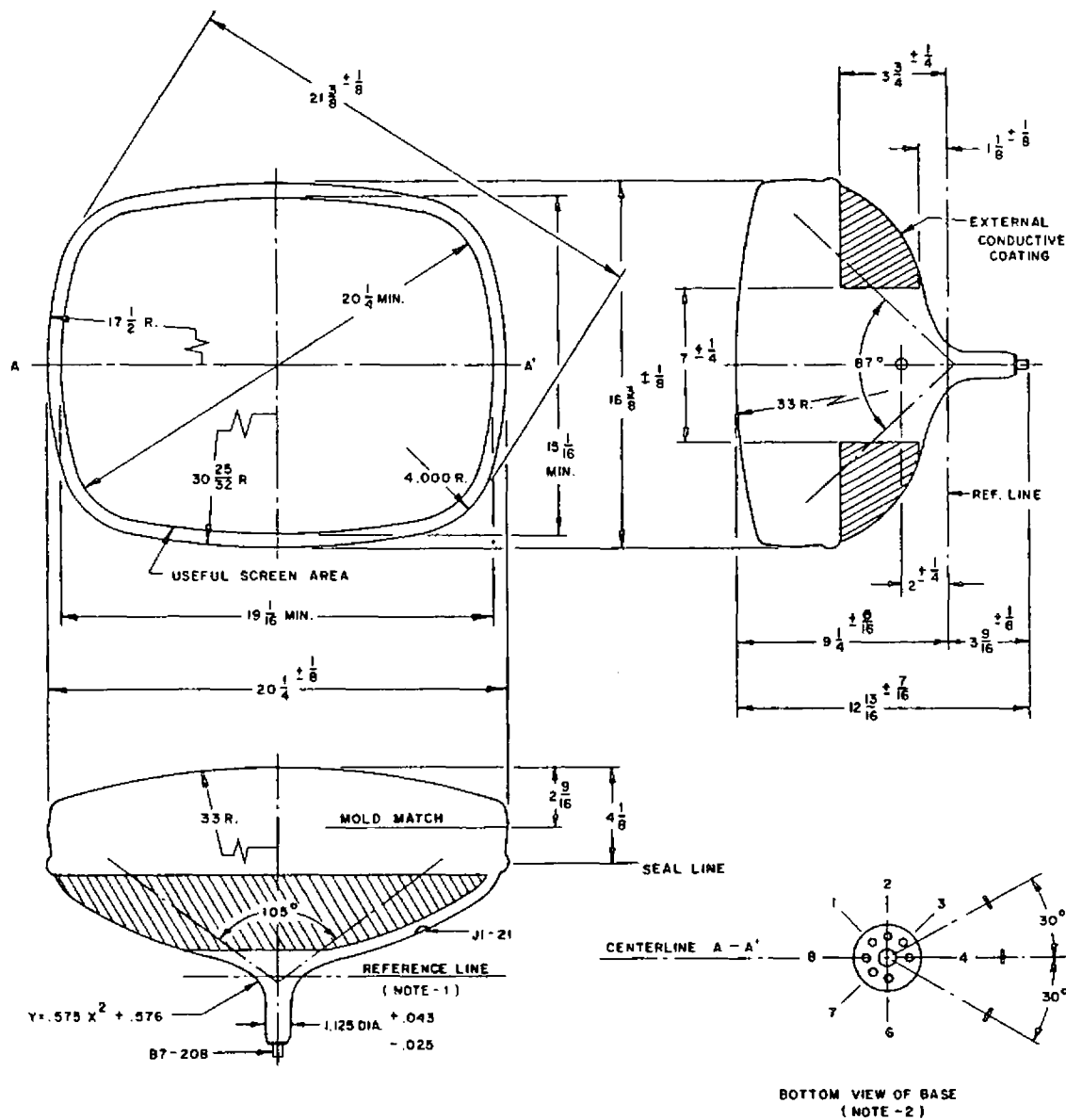


DIAGRAM NOTES:

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.