

**CHARACTERISTICS**

**GENERAL DATA**

Focusing Method . . . . .	Tri-Potential Electrostatic
Deflection Method . . . . .	Magnetic
Deflection Angles (Approx.)	
Horizontal . . . . .	102 Degrees
Diagonal . . . . .	114 Degrees
Vertical . . . . .	86 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.) . . . . .	44 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 μμf
Grid No. 1 to All Other Electrodes . . . . .	6 μμf
External Conductive Coating to Anode <sup>2</sup> . . . . .	1500 μμf      Max. 1000 μμf      Min.

**MECHANICAL DATA**

Minimum Useful Screen Dimensions (Maximum Assured)	
Height . . . . .	12 1/16 Inches
Width . . . . .	15 5/16 Inches
Diagonal . . . . .	17 3/4 Inches
Area . . . . .	174 Sq. Inches
Neck Length . . . . .	3 9/16 ± 1/8 Inches
Overall Length . . . . .	11 1/16 ± 5/16 Inches
Bulb . . . . .	C149 Exp. #5 or Equiv.
Safety Plate . . . . .	FP159A
Bulb Contact (Recessed Small Cavity Cap) . . . . .	J1-21
Base . . . . .	B7-208
Basing . . . . .	8JR
Weight (Approx.) . . . . .	18 1/2 Pounds

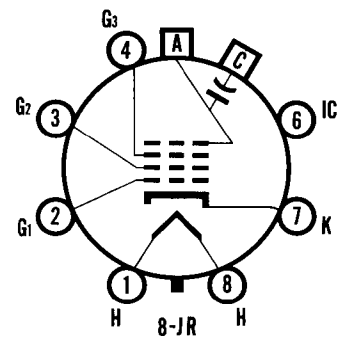
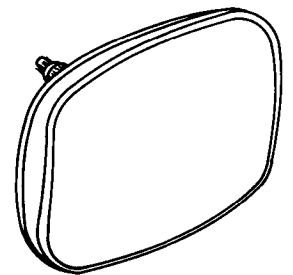
**RATINGS**

**MAXIMUM RATINGS (Design Maximum Values) Grid Drive Service**

Maximum Anode Voltage . . . . .	20,000 Volts	dc
Minimum Anode Voltage . . . . .	12,000 Volts	dc
Grid No. 3 Voltage (Focusing Electrode) . . . . .	700 Volts	dc
Grid No. 2 Voltage . . . . .	600 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value . . . . .	155 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	

**QUICK REFERENCE DATA**

- Television Picture Tube
- 19" Direct Viewed
- Rectangular Glass Type
- Spherical Faceplate
- Bonded Shield
- Gray Filter Glass
- Aluminized Screen
- Tri-Potential Electrostatic Focus
- 114° Magnetic Deflection
- No Ion Trap
- External Conductive Coating



**SYLVANIA  
ELECTRONIC TUBES**

A Division of  
Sylvania Electric Products Inc.

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

Prepared and Released By The  
TECHNICAL PUBLICATIONS SECTION  
EMPORIUM, PENNSYLVANIA

FEBRUARY, 1961

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File Under  
TELEVISION PICTURE TUBES

**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 . . . . .	500 Volts	dc
Grid No. 1 Voltage Required for Cutoff <sup>3</sup> . . . . .	-43 to -78 Volts	dc

**CIRCUIT VALUES**

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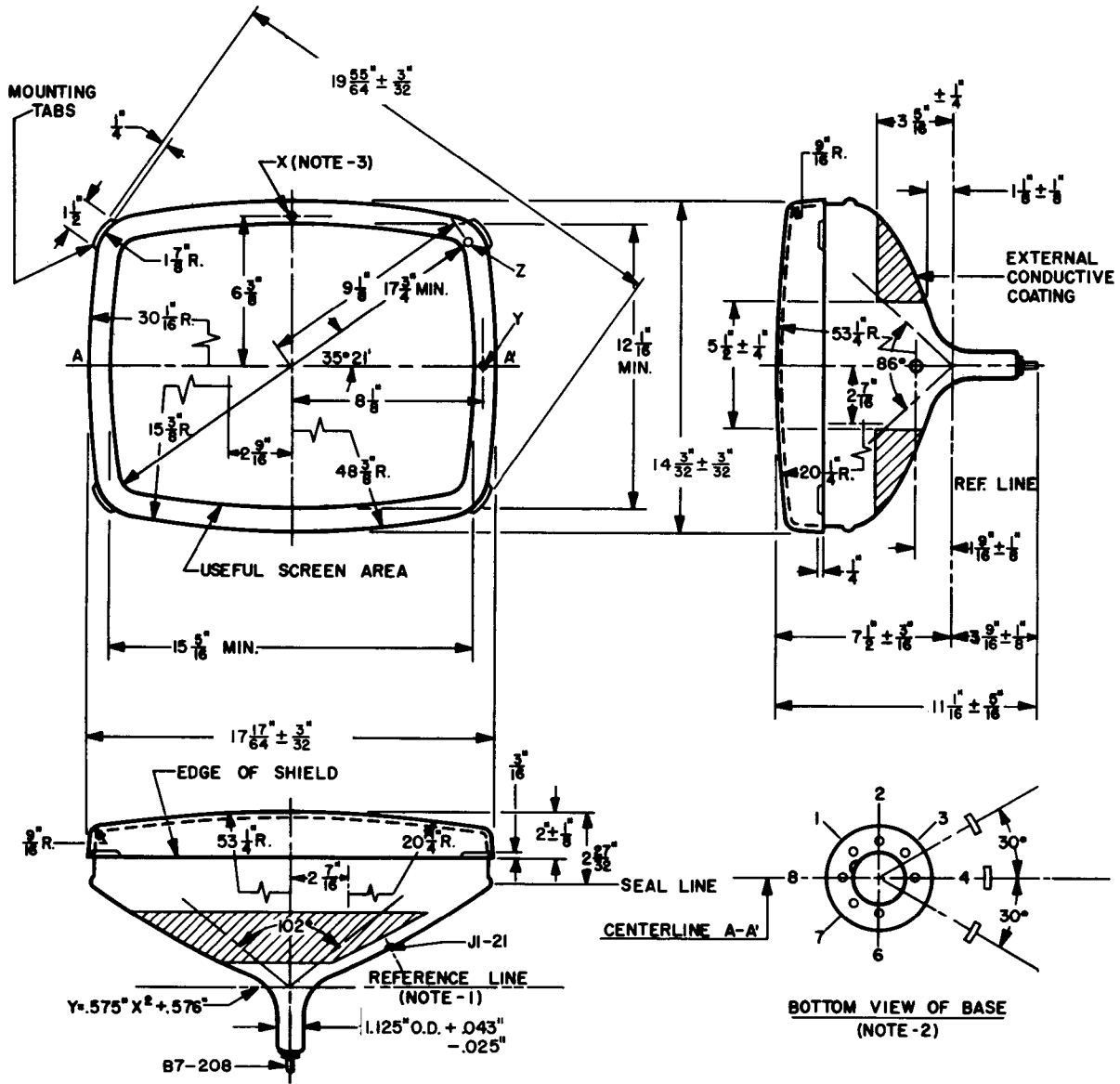
**NOTES:**

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. *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.*

OUTLINE



C60021A

DIAGRAM NOTES:

- Reference line is determined by plane C-C' of JEDEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.
- Base Pin No. 4 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.
- 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"