

**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 . . . . .	Short to Medium	
Faceplate . . . . .	Gray Filter Glass	
Light Transmittance (Approx.) . . . . .	79 Percent	

**ELECTRICAL DATA**

Heater Voltage . . . . .	6.3 Volts	
Heater Current . . . . .	0.45+5% Ampere	
Heater Warm-up Time <sup>1</sup> . . . . .	11 Seconds	
Direct Interelectrode Capacitances (Approx.)		
Cathode to All Other Electrodes . . . . .	5 $\mu\mu\text{f}$	
Grid No. 1 to All Other Electrodes . . . . .	6 $\mu\mu\text{f}$	
External Conductive Coating to Anode <sup>2</sup> . . . . .	1900 $\mu\mu\text{f}$ Max.	
	1400 $\mu\mu\text{f}$ Min.	

**MECHANICAL DATA**

Minimum Useful Screen Dimensions (Maximum Assured)	
Height . . . . .	12 Inches
Diagonal . . . . .	17 9/16 Inches
Width . . . . .	15 1/8 Inches
Minimum Useful Screen Area . . . . .	172 Sq. Inches
Neck Length . . . . .	4 1/8 $\pm$ 1/8 Inches
Bulb . . . . .	J149A
Bulb Contact (Recessed Small Cavity Cap) . . . . .	J1-21
Base . . . . .	B6-214
Basing . . . . .	7FA
Weight (Approx.) . . . . .	13 1/2 Pounds
Overall Length . . . . .	11 3/8 $\pm$ 1/4 Inches

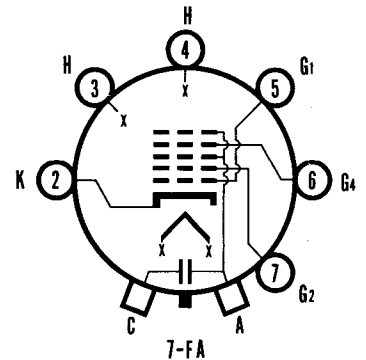
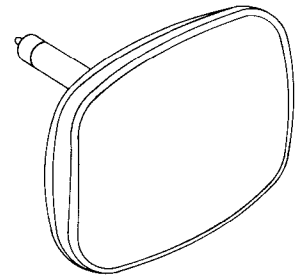
**RATINGS**

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

Anode Voltage		
Maximum . . . . .	19,800 Volts	dc
Minimum . . . . .	12,000 Volts	dc
Grid No. 4 Voltage (Focusing Electrode) <sup>4</sup> . . . . .	-550 to +1100 Volts	dc
Grid No. 2 Voltage		
Maximum . . . . .	70 Volts	dc
Minimum . . . . .	40 Volts	dc
Cathode Voltage		
Positive Bias Value . . . . .	100 Volts	dc
Negative Peak Value . . . . .	0 Volts	
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode During		
Warm-up Period not to Exceed 15 Seconds . . . . .	410 Volts	
After Equipment Warm-up Period . . . . .	180 Volts	
Heater Positive with Respect to Cathode . . . . .	180 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 1/8" Neck Diameter  
 No Ion Trap  
 External Conductive Coating  
 Low Grid No. 2 Voltage  
 Cathode Drive Design  
 6.3 Volt, 450 ma heater



**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

**TYPICAL OPERATING CONDITIONS<sup>3</sup>**

Anode Voltage . . . . .	14,500 Volts	dc
Grid No. 4 Voltage for Focus . . . . .	0 to +500 Volts	dc
Grid No. 2 Voltage . . . . .	50 Volts	dc
Cathode Voltage Required for Cutoff <sup>5</sup> . . . . .	35 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 its rated value 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 rated heater voltage divided by rated heater current.*
2. *External conductive coating must be grounded.*
3. *This type is designed for cathode-drive service. All voltages shown are positive with respect to Grid No. 1 Voltage, unless otherwise indicated.*
4. *The focus electrode may be modulated to improve overall focus.*
5. *Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be increased approximately 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.*

OUTLINE

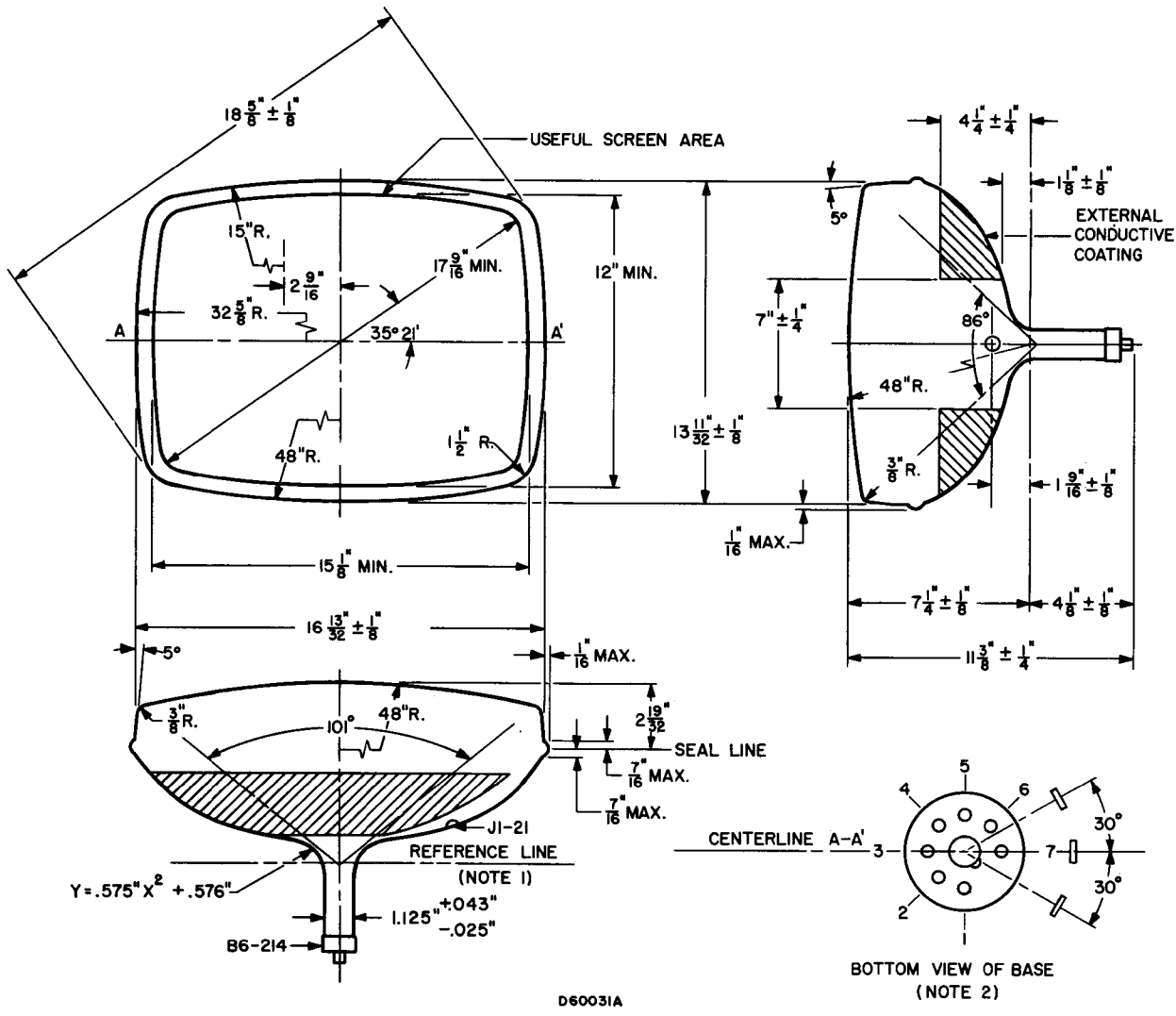


DIAGRAM NOTES:

1. Reference line is determined by plane C-C' JEDEC No. 126 Reference Gauge when the gauge is seated against the bulb.
2. Base Pin No. 7 aligns with anode contact (J1-21) within  $30^\circ$ .