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 1 ................................. 11 Seconds
Direct Inter-electrode Capacitance (Approx.)
  Cathode to All Other Electrodes ................ 5 µf
  Grid No. 1 to All Other Electrodes ............. 6 µf
  External Conductive Coating to Anode 2 ....... 1900 µf Max.
                                          1400 µf Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)
  Height ............................................. 12 Inches
  Diagonal ......................................... 17 9/16 Inches
  Width ............................................ 15 5/8 Inches
Minimum Useful Screen Area ......................... 172 Sq. Inches
Neck Length ........................................... 4 1/8 ± 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 ± 3/4 Inches

RATINGS

MAXIMUM RATINGS (Design Maximum Values) 3

Anode Voltage
  Maximum ........................................ 19,800 Volts dc
  Minimum ......................................... 12,000 Volts dc
Grid No. 4 Voltage (Focusing Electrode) 4
  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

SYLVANIA ELECTRONIC TUBES
A Division of Sylvania Electric Products Inc.
PICTURE TUBE OPERATIONS
SENeca FALLS, NEW YORK
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File Under TELEVISION PICTURE TUBES
## TYPICAL OPERATING CONDITIONS

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<td>Anode Voltage</td>
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<td>dc</td>
</tr>
<tr>
<td>Grid No. 4 Voltage for Focus</td>
<td>0 to +500 Volts</td>
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<tr>
<td>Cathode Voltage Required for Cutoff</td>
<td>35 to 50 Volts</td>
<td>dc</td>
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</tbody>
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## CIRCUIT VALUES

| Grid No. 1 Circuit Resistance                 | 1.5 Megohms Max. |

## 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.
**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°.