CHARACTERISTICS

GENERAL DATA

Focusing Method ........................................... Magnetic
Deflection Method ............................................ Magnetic
Deflection Angle (Approx.) ................................ 50 Degrees
Types* .......................................................... 12DP7A/12DP7C
  Fluorescence .............................................. Blue-White
  Phosphorescence .......................................... Yellow
  Persistence .................................................. Long
Faceplate ...................................................... Clear or Gray
Light Transmittance (approx.) ................................
  Gray Faceplate .......................................... 75 Percent
  Screen ......................................................... Aluminized

*In addition to the types shown, the 12DP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage ............................................... 6.3 Volts
Heater Current ............................................... 0.6 ± 10% Ampere
Direct Interelectrode Capacitance (approx.)
  Cathode to All Other Electrodes ....................... 5 μf
  Grid No. 1 to All Other Electrodes ................... 8 μf

MECHANICAL DATA

Minimum Useful Screen Diameter ......................... 10 Inches
Bulb .............................................................. J968 or Equivalent
Bulb Contact (Medium Cap) ............................... C1-5
Base
  12DP7A (Long Medium Shell Octal) ....................... B5-80 or B8-65
  12DP7C (Long Medium Shell 8-Pin) ..................... B8-65
Basing .......................................................... 5AN
Bulb Contact Alignment
  Anode Contact Aligns with Pin No. 5 ................. ±10 Degrees
  Weight (Approx.) ......................................... 8½ Pounds

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

<table>
<thead>
<tr>
<th></th>
<th>12DP7A</th>
<th>12DP7C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anode Voltage</td>
<td>11,000</td>
<td>13,200 Volts dc</td>
</tr>
<tr>
<td>Grid No. 2 Voltage</td>
<td>770</td>
<td>770 Volts dc</td>
</tr>
<tr>
<td>Grid No. 1 Voltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Bias Value</td>
<td>200</td>
<td>200 Volts dc</td>
</tr>
<tr>
<td>Positive Bias Value</td>
<td>0</td>
<td>0 Volts dc</td>
</tr>
<tr>
<td>Positive Peak Value</td>
<td>2</td>
<td>2 Volts</td>
</tr>
<tr>
<td>Peak Heater-Cathode Voltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heater Negative with Respect to Cathode</td>
<td>140</td>
<td>200 Volts</td>
</tr>
<tr>
<td>Heater Positive with Respect to Cathode</td>
<td>140</td>
<td>200 Volts</td>
</tr>
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</table>

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
MARCH, 1960
PAGE 1 OF 3
File Under SPECIAL AND GENERAL PURPOSE CATHODE RAY TUBES
## TYPICAL OPERATING CONDITIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Anode Voltage</td>
<td>4,000 Volts</td>
</tr>
<tr>
<td>Grid No. 2 Voltage</td>
<td>250 Volts</td>
</tr>
<tr>
<td>Grid No. 1 Voltage Required for Cutoff</td>
<td>-25 to -70 Volts</td>
</tr>
<tr>
<td>Focusing Coil Current (approx.) (^3)</td>
<td>75 to 102 Ma</td>
</tr>
<tr>
<td>Line Width A, (12DP7C) (^4)</td>
<td>0.50 mm</td>
</tr>
</tbody>
</table>

## CIRCUIT VALUES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid No. 1 Resistance</td>
<td>1.5 Megohms Max.</td>
</tr>
</tbody>
</table>

## NOTES:

1. *Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 4,000 volts.*

2. *Visual extinction of undeflected focused spot.*

3. *For JEDEC focusing coil No. 106 or equivalent with distance from the yoke reference line to center of air gap equal to 41/8 inches.*

4. *Measured in accordance with MIL-E-1, at an anode current of 200 µA.*

## 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 the plane of the upper edge of the reference line gauge (JEDEC No. 112) when the gauge is resting on the cone.

2. Anode Terminal aligns with Pin No. 5 ± 10 degrees and is on same side as Pin No. 5.