CHARACTERISTICS

GENERAL DATA

Focusing Method ........................................ Magnetic
Deflecting Method ........................................ Magnetic
Deflection Angle (Approx.) .............................. 50 Degrees

Types* 10KP7A 10KP7B
Fluorescence .............................................. Blue-White  Blue-White
Phosphorescence .......................................... Yellow  Yellow
Persistence ................................................ Long  Long
Screen ...................................................... Aluminized
Faceplate .................................................. Gray Filter  Gray Filter

Light Transmittance (approx.) ................. 77  77

*In addition to the types shown, the 10KP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

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

MECHANICAL DATA

Minimum Useful Screen Diameter ..................... 9 Inches
Bulb Contact (Recessed Small Cavity Cap) ........ J1-21
Bulb ......................................................... J84C or J84D
Base (Small-Shell Duodecal 5-Pin) ................. B5-57
Basing ..................................................... 12D
Bulb Contact Aligns with Vacant Pin
  Position No. 3 ........................................ ±10 Degrees
  Weight (approx.) ....................................... 9 Pounds

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage
10KP7, 10KP7A ........................................... 11,000 Volts dc
10KP7B .................................................. 13,200 Volts dc
Grid No. 2 Voltage ...................................... 770 Volts dc
MAXIMUM RATINGS (Absolute Maximum Values) (Cont’d)

Grid No. 1 Voltage
Negative Bias Value ........................................ 200 Volts dc
Positive Bias Value ......................................... 0 Volts dc
Positive Peak Value ........................................ 2 Volts

Peak Heater Cathode Voltage

<table>
<thead>
<tr>
<th></th>
<th>10KP7</th>
<th>10KP7A</th>
<th>10KP7B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Negative with Respect to Cathode</td>
<td>140</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>During Warm-up Period not to Exceed</td>
<td></td>
<td></td>
<td>450 Volts</td>
</tr>
<tr>
<td>15 Seconds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After Equipment Warm-up Period</td>
<td></td>
<td></td>
<td>200 Volts</td>
</tr>
<tr>
<td>Heater Positive with Respect to Cathode</td>
<td>140</td>
<td>200</td>
<td>200 Volts</td>
</tr>
</tbody>
</table>

TYPICAL OPERATING CONDITIONS

Anode Voltage\(^1\) ........................................ 9000 Volts dc
Grid No. 2 Voltage ........................................ 250 Volts dc
Grid No. 1 Voltage Required for Cutoff\(^2\) ............... \(-27 \text{ to } -63\) Volts dc
Focusing Coil Current (Approx.) \(^3\) .................. 112 \pm 15\% Ma dc
Line Width A\(^4\) (10KP7A and 10KP7B) .................. 0.38 mm Max.

MAXIMUM CIRCUIT VALUES

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

NOTES:

1. Brilliance and definition decrease with decreasing Anode Voltage. In general, the Anode Voltage should not be less than 7000 volts for Type 10KP7B and not less than 5000 volts for Types 10KP7 and 10KP7A.

2. Visual extinction of focused spot.

3. For JEDEC focusing coil 106 or equivalent, center of air gap 3½ inches from Reference Line at an anode current of 200 \(\mu\)a.

4. Measured in accordance with MIL-E-1, at an anode current of 200 \(\mu\)a.

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 seated on the cone.
2. Anode terminal aligns with Pin Position No. 3 ± 10 degrees and is on same side of bulb as Pin Position No. 3.