

## CHARACTERISTICS

### GENERAL DATA

|                                                     |               |
|-----------------------------------------------------|---------------|
| Focusing Method . . . . .                           | Electrostatic |
| Deflecting Method . . . . .                         | Electrostatic |
| Types* Fluorescence Phosphorescence Persistence     |               |
| 3KP1 Green ——— Medium                               |               |
| 3KP4 White ——— Short to Medium                      |               |
| 3KP7 Blue-White Yellow Long                         |               |
| 3KP11 Blue ——— Short                                |               |
| 3KP16 Violet & Near Ultraviolet ——— Extremely Short |               |

Faceplate . . . . . Clear, Spherical

\*In addition to the types shown, the 3KP- can be supplied with several other screen phosphors.

### ELECTRICAL DATA

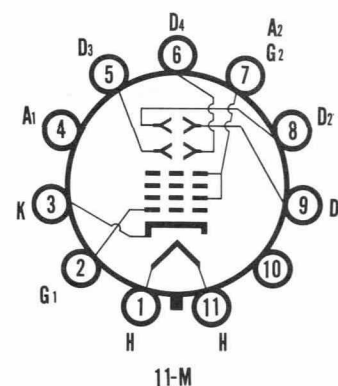
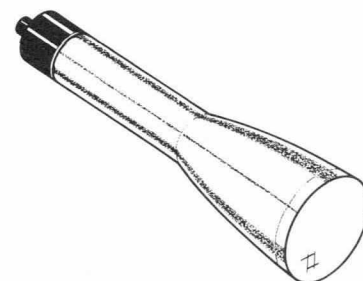
|                                                      |                       |
|------------------------------------------------------|-----------------------|
| Heater Voltage . . . . .                             | 6.3 Volts             |
| Heater Current . . . . .                             | $0.6 \pm 10\%$ Ampere |
| Direct Interelectrode Capacitances (Approx.)         |                       |
| Grid No. 1 to All Other Electrodes . . . . .         | 8 $\mu\text{mf}$      |
| Between Deflecting Plates 1-2 . . . . .              | 2.5 $\mu\text{mf}$    |
| Between Deflecting Plates 3-4 . . . . .              | 2.5 $\mu\text{mf}$    |
| Deflecting Plate 1 to All Other Electrodes . . . . . | 11 $\mu\text{mf}$     |
| Deflecting Plate 2 to All Other Electrodes . . . . . | 8 $\mu\text{mf}$      |
| Deflecting Plate 3 to All Other Electrodes . . . . . | 7 $\mu\text{mf}$      |
| Deflecting Plate 4 to All Other Electrodes . . . . . | 8 $\mu\text{mf}$      |

### MECHANICAL DATA

|                                                               |                       |
|---------------------------------------------------------------|-----------------------|
| Minimum Useful Screen Diameter . . . . .                      | $2\frac{3}{4}$ Inches |
| Bulb . . . . .                                                | J24N                  |
| Base (Medium Shell Magnal 11-Pin) . . . . .                   | B11-66                |
| Basing . . . . .                                              | 11M                   |
| Base Alignment                                                |                       |
| D3-D4 Trace Aligns with Pin No. 1 and Tube Axis . . . . .     | $\pm 10$ Degrees      |
| Positive Voltage on D1 Deflects Beam Approx. Toward Pin No. 4 |                       |
| Positive Voltage on D3 Deflects Beam Approx. Toward Pin No. 1 |                       |
| Angle Between D1-D2 and D3-D4 Traces . . . . .                | $90 \pm 3$ Degrees    |
| Weight (Approx.) . . . . .                                    | $\frac{3}{4}$ Pound   |

## QUICK REFERENCE DATA

3" Direct Viewed  
Round Glass Type  
Clear, Spherical Faceplate  
Electrostatic Deflection  
Electrostatic Focus



## SYLVANIA ELECTRONIC TUBES

A Division of  
Sylvania Electric Products Inc.

PICTURE TUBE OPERATIONS  
SENECA FALLS, NEW YORK

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File Under  
SPECIAL AND GENERAL PURPOSE  
CATHODE RAY TUBES

## RATINGS

## MAXIMUM RATINGS (Absolute Maximum Values)

|                                                           |               |
|-----------------------------------------------------------|---------------|
| Anode No. 2 Voltage <sup>1</sup>                          | 2750 Volts dc |
| Anode No. 1 Voltage (Focusing Electrode)                  | 1100 Volts dc |
| Grid No. 1 Voltage                                        |               |
| Negative Bias Value                                       | 220 Volts dc  |
| Positive Bias Value                                       | 0 Volts dc    |
| Positive Peak Value                                       | 2 Volts       |
| Peak Heater-Cathode Voltage                               |               |
| Heater Negative with Respect to Cathode                   | 140 Volts     |
| Heater Positive with Respect to Cathode                   | 140 Volts     |
| Peak Voltage Between Anode No. 2 and Any Deflecting Plate | 550 Volts     |

## TYPICAL OPERATING CONDITIONS

|                                                     |                                                                            |
|-----------------------------------------------------|----------------------------------------------------------------------------|
| Anode No. 2 Voltage <sup>2</sup>                    | 2000 Volts dc                                                              |
| Anode No. 1 Voltage for Focus                       | 320 to 600 Volts dc                                                        |
| Grid No. 1 Voltage Required for Cutoff <sup>3</sup> | -38 to -90 Volts dc                                                        |
| Deflection Factor                                   |                                                                            |
| Deflecting Plates 1-2 <sup>4</sup>                  | 100 to 136 Volts dc/Inch                                                   |
| Deflecting Plates 3-4 <sup>5</sup>                  | 76 to 104 Volts dc/Inch                                                    |
| Spot Position (Focused, Undelected) <sup>6</sup>    | Within a Circle of 7.5 mm Radius concentric<br>with the center of the face |

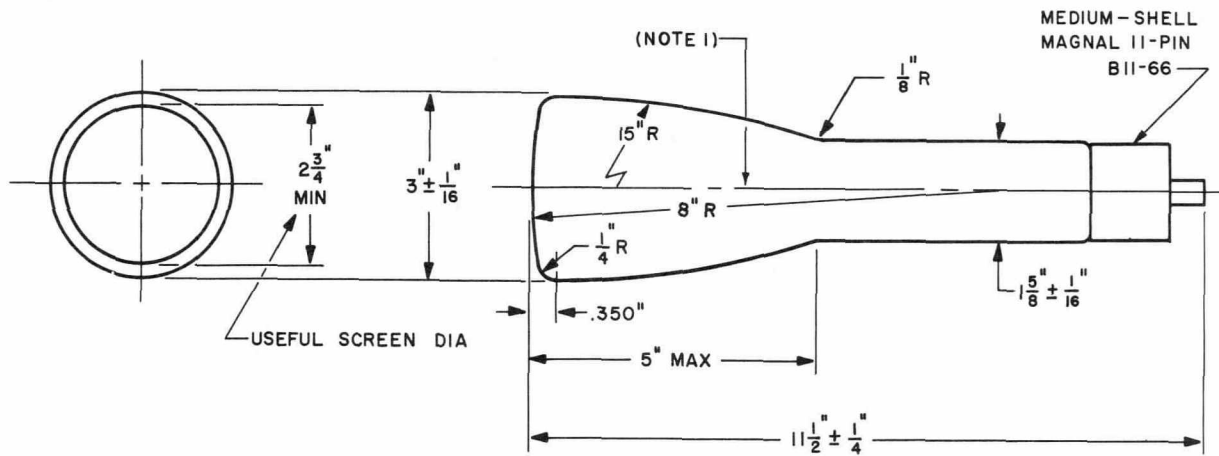
## CIRCUIT VALUES

|                                                             |                  |
|-------------------------------------------------------------|------------------|
| Grid No. 1 Circuit Resistance                               | 1.5 Megohms Max. |
| Resistance in any Deflecting Electrode Circuit <sup>7</sup> | 5.0 Megohms Max. |

## NOTES:

1. Anode No. 2 power input should be limited to 6 watts.
2. Brilliance and definition decrease with decreasing Anode No. 2 Voltage. Recommended minimum for Type 3KP1 is 1000 volts. Recommended minimum for Types 3KP4, 3KP7, 3KP11 and 3KP16 is 1500 volts.
3. Visual extinction of undeflected focused spot.
4. Deflecting Plates D1-D2 are nearer the screen.
5. Deflecting Plates D3-D4 are nearer the base.
6. With tube shielded and all deflection plates connected to Anode No. 2.
7. It is recommended that deflecting electrode circuit resistances be approximately equal.

OUTLINE



S 58060

DIAGRAM NOTE:

1. Centerline of bulb will not deviate more than  $\pm 2$  degrees in any direction from perpendicular erected at center of bottom of base.