SYLVANIA

engineering data service

SYLVANIA
3KP1
3KP*

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 ± 10% Ampere
Direct Interelectrode Capacitances (Approx.)
- Grid No. 1 to All Other Electrodes . . . . . 8 μμf
- Between Deflecting Plates 1-2 . . . . . 2.5 μμf
- Between Deflecting Plates 3-4 . . . . . 2.5 μμf
- Deflecting Plate 1 to All Other Electrodes . . . 11 μμf
- Deflecting Plate 2 to All Other Electrodes . . . 8 μμf
- Deflecting Plate 3 to All Other Electrodes . . . 7 μμf
- Deflecting Plate 4 to All Other Electrodes . . . 8 μμf

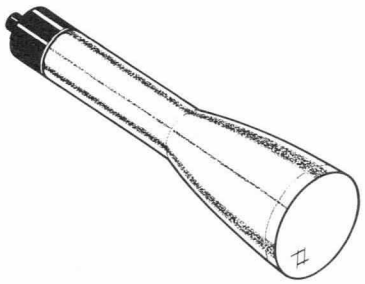
MECHANICAL DATA

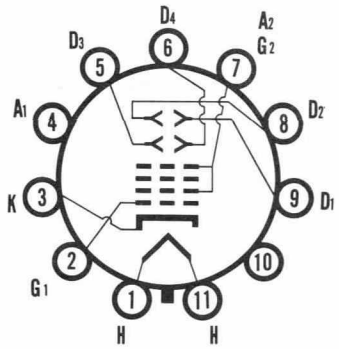
Minimum Useful Screen Diameter . . . . . 2¾ Inches
Bulb J24N
Base (Medium Shell Magnal 11-Pin) B11-66
Basing 11M
Base Alignment
- D3-D4 Trace Aligns with Pin No. 1 and Tube Axis . . . . . ± 10 Degrees
- Positive Voltage on D1 Deflects Beam Approx. Toward Pin No. 4
- Positive Voltage on D3 Deflects Beam Approx. Toward Pin No. 1

Angle Between D1-D2 and D3-D4 Traces . . . . 90 ± 3 Degrees
Weight (Approx.) . . . . . ¾ Pound

QUICK REFERENCE DATA

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





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SYLVANIA
ELECTRONIC TUBES
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SPECIAL AND GENERAL PURPOSE
CATHODE RAY TUBES

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

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

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
Resistance in any Deflecting Electrode Circuit[7]	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

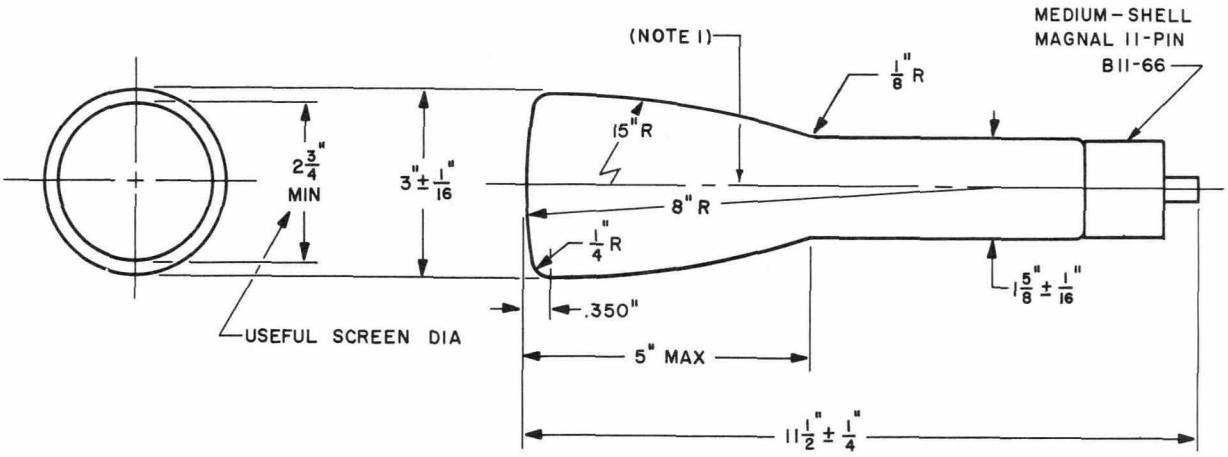

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DIAGRAM NOTE:

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