SYLVANIA

engineering data service

SYLVANIA
7ABP7
7ABP7A
7ABP14
7ABP14A
7ABP19
7ABP19A

CHARACTERISTICS

GENERAL DATA

Focusing Method	Self Focusing (Electrostatic)
Deflection Method	Magnetic
Deflection Angle (approx.)	50 Degrees
Phosphor	P7
Fluorescence	Blue-White
Phosphorescence	Yellow
Persistence	Long
Faceplate	Clear

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 ±10% Ampere
Direct Interelectrode Capacitances (approx.)	
Cathode to All Other Electrodes	5 μμf
Grid No. 1 to All Other Electrodes	6 μμf

MECHANICAL DATA

Minimum Useful Screen Diameter	6 Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base (Small Shell Duodecal 6-Pin)	B6-63
Basing	12M
Bulb Contact Aligns with Pin No. 3	±10 Degrees

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	11,000 Volts	dc
Grid No. 4 (Focusing Electrode) Voltage	−550 to +1100 Volts	dc
Grid No. 2 Voltage	770 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value	200 Volts	dc
Positive Bias Value[1]	0 Volts	dc
Positive Peak Value	0 Volts	
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	200 Volts	
Heater Positive with Respect to Cathode	200 Volts	

TYPICAL OPERATING CONDITIONS

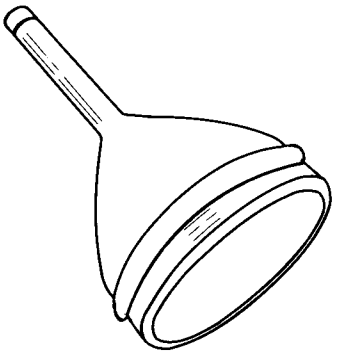
Anode Voltage[2]	7000 Volts	dc
Grid No. 4 Voltage for Focus[3]	0 to 250 Volts	dc
Grid No. 2 Voltage	300 Volts	dc
Grid No. 1 Voltage[4]	−28 to −72 Volts	dc

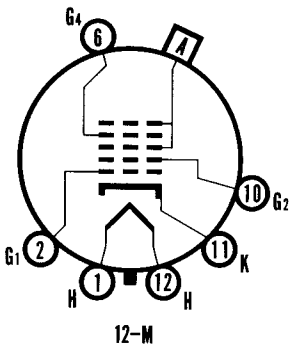
CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.

QUICK REFERENCE DATA

Special Purpose Tube
7" Direct Viewed
Round Glass Type
Electrostatic Focus
Magnetic Deflection
High Resolution





12-M

SYLVANIA ELECTRIC PRODUCTS INC.
TELEVISION PICTURE TUBE DIVISION
SENECA FALLS, NEW YORK

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NOTES:

1. *At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts. The screen of the 7ABP19 can be permanently damaged should the current density be permitted to rise too high. To prevent burning, minimum beam current densities should be employed.*
2. *Brilliance and definition decrease with decreasing anode voltage. In general, anode voltage should not be less than 5,000 volts, except for the 7ABP19. For this type the anode voltage should not be less than 7,000 volts.*
3. *With Eg1 adjusted for Ib = 100 μa and beam focused for minimum width of individual lines at center of screen.*
4. *Visual extinction of undeflected focused spot.*

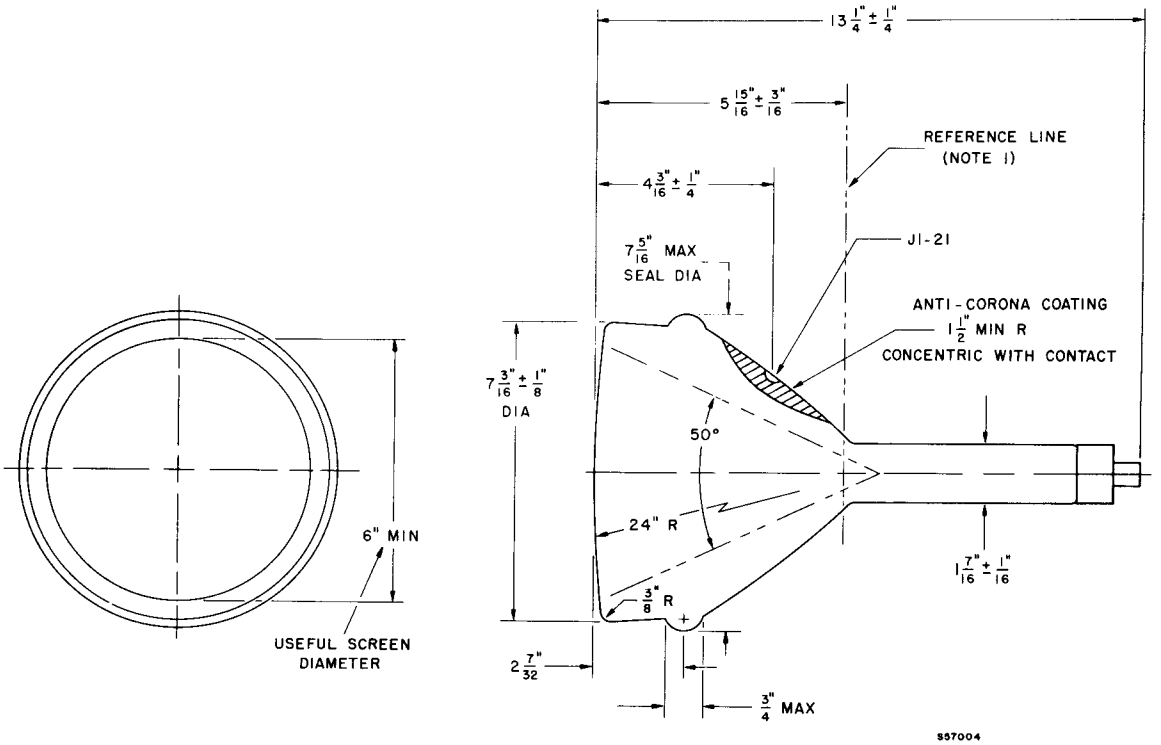

DIAGRAM NOTES:

1. *Reference line is determined by the point where 1.500 $^{+.003}_{-.000}$ inch diameter ring gauge 2 inches long will stop.*

7ABP7A

The Sylvania Type 7ABP7A is identical to the Type 7ABP7 except that it has an aluminized screen.

7ABP14

The Sylvania Type 7ABP14 is identical to the Type 7ABP7 except that it has a purple fluorescence, orange phosphorescence and medium long persistence phosphor.

7ABP14A

The Sylvania Type 7ABP14A is identical to the Type 7ABP14 except that it has an aluminized screen.

7ABP19

The Sylvania Type 7ABP19 is identical to the Type 7ABP7 except that it has an orange fluorescence and long persistence.

7ABP19A

The Sylvania Type 7ABP19A is identical to the Type 7ABP19 except that it has an aluminized screen.

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.