



engineering data service

SYLVANIA
10WP7 10WP7A
10WP14 10WP14A
10WP19 10WP19A

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic		
Deflection Method	Magnetic		
Deflection Angle (approx.)	50 Degrees		
Phosphor	P7	P14	P19
Fluorescence	Blue	Purple	Orange
Phosphorescence	Yellow	Yellow	Orange
Persistence	Long	Medium-Long	Long
Faceplate	Gray Filter Glass		
Light Transmittance	76 Percent		

ELECTRICAL DATA

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

MECHANICAL DATA

Minimum Useful Screen Diameter	9 Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base (Small Shell Duodecal 6-Pin)	B6-63
Basing	12M
Bulb Contact Aligns with Vacant Pin	
Position No. 3	± 10 Degrees

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	13,200 Volts	dc
Grid No. 4 Voltage		
(Focusing Electrode)	-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	dc
Heater Positive with Respect to Cathode	200 Volts	dc

TYPICAL OPERATING CONDITIONS

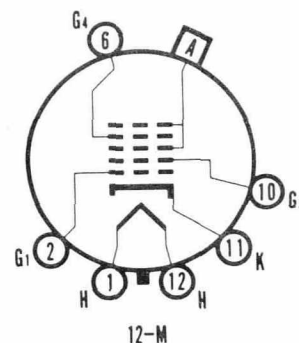
Anode Voltage ²	10,000 Volts	dc
Grid No. 4 Voltage for Focus ³	0 to 300 Volts	dc
Grid No. 2 Voltage	300 Volts	dc
Grid No. 1 Voltage for Cutoff ⁴	-28 to -72 Volts	dc

MAXIMUM CIRCUIT VALUE

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
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QUICK REFERENCE DATA

Special Purpose Tube
10" Direct Viewed
Round Glass Type
Spherical Faceplate
Gray Filter Glass
Magnetic Deflection
Electrostatic Focus



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 10WP19 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 7,000 volts.*
3. *With E_{g1} adjusted for $I_b = 100$ microamperes, E_{g2} is adjusted for best overall focus of a 6" x 8" raster pattern.*
4. *Visual extinction of focused raster. Extinction of stationary focused spot will require that those values be about 5 volts more negative.*

10WP7A, 10WP14A, 10WP19A

These types are identical to the 10WP7, 10WP14, and 10WP19, respectively, except that they employ aluminized screens.

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.

DIAGRAM NOTES:

1. Reference line is the point where a $1.500 \begin{smallmatrix} +.003 \\ -.000 \end{smallmatrix}$ diameter ring gauge 2 inches long, will stop against bulb.
2. Anti-Corona coating 1-1/2 inch min. radius concentric with contact. Do not handle tube by the part of the bulb having the anti-corona coating.