

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Electrostatic
Types*	
Fluorescence	3WP1 Green 3WP2 Blue-Green 3WP11 Blue
Phosphorescence	3WP1 Green 3WP2 Green 3WP11
Persistence	3WP1 Medium 3WP2 Long 3WP11 Short
Faceplate	Flat, Clear

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

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 ± 10% Ampere
Direct Interelectrode Capacitances	

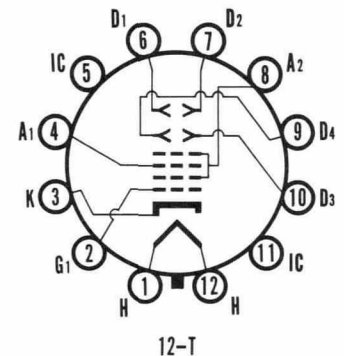
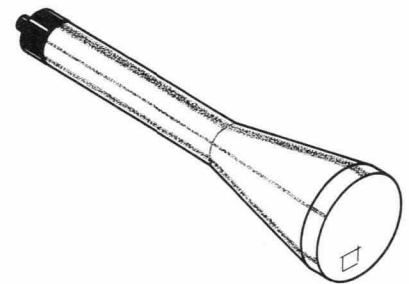
	Min.	Max.
Cathode to All Other Electrodes	3.0	5.7 $\mu\mu\text{f}$
Grid No. 1 to All Other Electrodes	4.6	8.7 $\mu\mu\text{f}$
Between Deflecting Plates 1-2	1.7	3.3 $\mu\mu\text{f}$
Between Deflecting Plates 3-4	1.0	2.0 $\mu\mu\text{f}$
Deflecting Plate 1 to All Other Electrodes except D2	3.8	7.2 $\mu\mu\text{f}$
Deflecting Plate 2 to All Other Electrodes except D1	3.8	7.2 $\mu\mu\text{f}$
Deflecting Plate 3 to All Other Electrodes except D4	2.5	4.8 $\mu\mu\text{f}$
Deflecting Plate 4 to All Other Electrodes except D3	2.5	4.8 $\mu\mu\text{f}$

MECHANICAL DATA

Minimum Useful Screen Diameter	2 $\frac{3}{4}$ Inches
Base (Small Shell Duodecal 12-Pin or Small Shell Duodecal 10-Pin)	B12-43 B10-75
Basing	12T
Base Alignment	
D1-D2 trace aligns with Pin No. 3 and Tube Axis	±10 Degrees
Angle Between D1-D2 and D3-D4 Traces	90 ± 1 Degree
Positive voltage on D1 deflects beam approximately toward Pin No. 3.	
Positive voltage on D3 deflects beam approximately toward Pin No. 12.	

QUICK REFERENCE DATA

3" Direct Viewed
Round Glass Type
Electrostatic Deflection
Electrostatic Focus
High Deflection Sensitivity
Flat, Clear Faceplate



SYLVANIA
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File Under
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	0 Volts
Peak Heater Cathode Voltage	
Heater Negative with Respect to Cathode	200 Volts
Heater Positive with Respect to Cathode	200 Volts
Peak Voltage Between Anode No. 2 and Any Deflecting Plate	550 Volts

TYPICAL OPERATING CONDITIONS

Anode No. 2 Voltage	1500 Volts dc
Anode No. 1 Voltage for Focus	247 to 465 Volts dc
Grid No. 1 Voltage Required for Cutoff ²	-45 to -75 Volts dc
Deflection Factor	
Deflecting Plates 1-2	62 to 76 Volts dc/Inch
Deflecting Plates 3-4	43 to 52 Volts dc/Inch
Modulation ³ (3WP1, at 7 Ft. L. Light Output)	50 Volts Max.
Line Width A ³ (3WP1, at 7 Ft. L. Light Output)	.026 Inches Max.
Deflection Factor Uniformity ⁴	2 Percent Max.
Pattern Distortion @ 75% of Useful Scan ⁵	2 1/2 Percent Max.
Spot Position (Focused, Undelected) ⁶	Within a 3/16 Inch Radius Circle
Useful Scan	
D1-D2 ± 1.25 Inches from Tube Face Center or a total of 2.50 Inches Min.	
D3-D4 ± 1.125 Inches from Tube Face Center or a total of 2.25 Inches Min.	

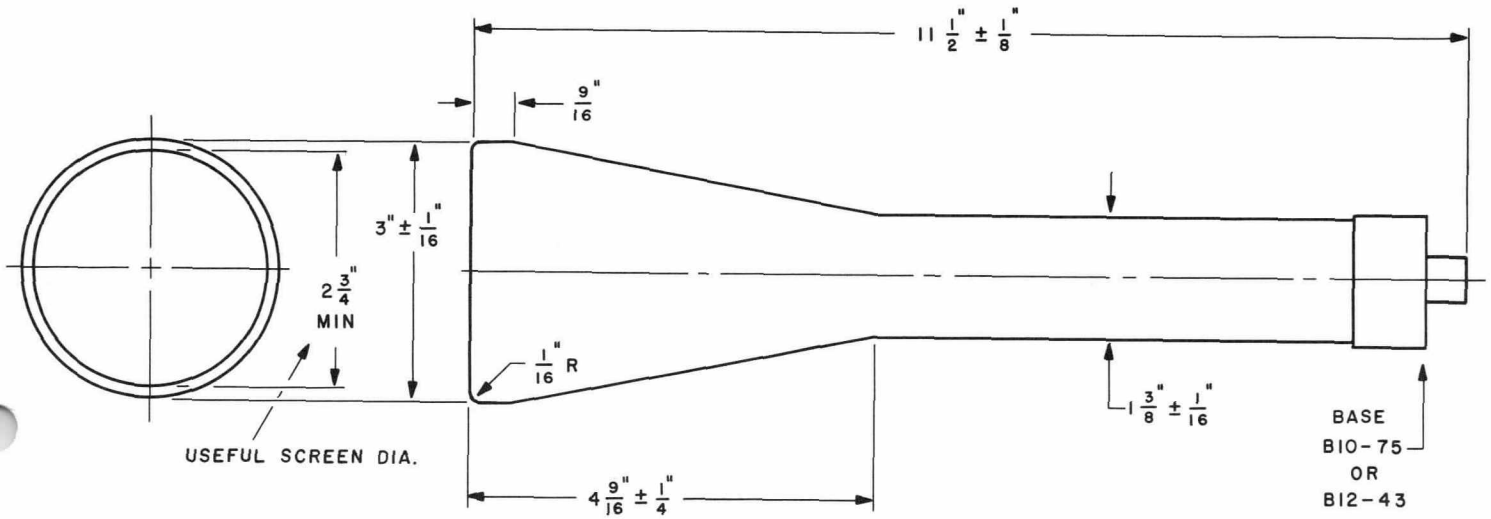
CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
Deflection Circuit Resistance ⁷	5.0 Megohms Max.

NOTES:

1. The product of acceleration voltage and average acceleration current should be limited to 6.0 watts.
2. Visual extinction of undeflected focused spot.
3. Measured in accordance with MIL-E-1.
4. The deflection factors of 75% of useful scan and at 25% of useful scan shall not differ by more than the indicated value.
5. The edges of a raster pattern, whose mean dimensions are the indicated percentage of useful scan, shall not deviate from the mean dimensional rectangle by more than the specified amount.
6. Centered on the tube face with the tube shielded and with all deflection plates connected to anode No. 2.
7. It is recommended that the deflecting electrode circuit resistances be approximately equal.

OUTLINE



S 58068