CHARACTERISTICS

GENERAL DATA

Focusing Method			Electrostatic	
Deflecting Method			Electrostatic	
Phosphor*	P1	P2	P7	P11
Fluorescence	Green	Green	White	Blue
Phosphorescence	Green	Green	Yellow	—
Persistence	Medium	Medium	Long	Short
Faceplate			Gray Filter Glass	

*In addition to the screens shown, the 12AXP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 ± 10 % Amperes
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes	10 pf
Grid No. 1 to All Other Electrodes	8 pf
Between Deflecting Plates 1-2	4 pf
Between Deflecting Plates 3-4	2 pf
Deflecting Plate 1 to All Other Electrodes Except D2	8 pf
Deflecting Plate 2 to All Other Electrodes Except D1	8 pf
Deflecting Plate 3 to All Other Electrodes Except D4	6 pf
Deflecting Plate 4 to All Other Electrodes Except D3	6 pf

MECHANICAL DATA

Minimum Useful Screen Diameter	11 Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base (Medium Shell Diheptal 12-Pin)	B12-37
Basing	14J
Weight (Approx.)	12 Pounds
J1-21 Contact Aligns with Trace D1-D2	±10 Degrees
J1-21 Contact Aligns with Pin No. 5	±10 Degrees
Positive Voltage on D1 Deflects Beam Approx. Toward Pin No. 5	
Positive Voltage on D3 Deflects Beam Approx. Toward Pin No. 1	
Bulb	C99½ Exp. 28, or Equivalent

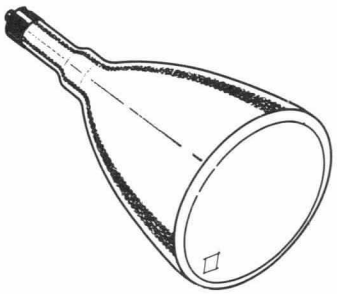
RATINGS

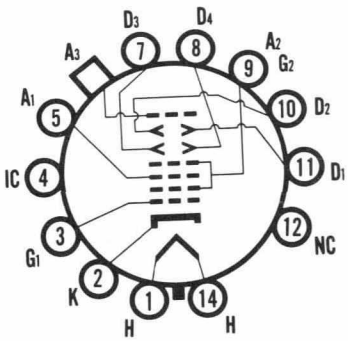
MAXIMUM RATINGS (Absolute Maximum Values)

Anode Input[1]	6 Watts	
Anode No. 3 Voltage	12,000 Volts	dc
Anode No. 2 Voltage	6000 Volts	dc
Anode No. 1 Voltage	2500 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value	200 Volts	dc
Positive Bias Value	0 Volt	dc
Positive Peak Value	2 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	750 Volts	
Ratio (Post Accelerator Voltage to Anode Voltage)	2.3:1	

QUICK REFERENCE DATA

Oscilloscope Tube
12″ Direct Viewed
Round Glass Type
Electrostatic Deflection
Electrostatic Focus
Post Deflection Acceleration





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SYLVANIA ELECTRIC PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

A Technical Publication

MARCH, 1965

File Under

SPECIAL AND GENERAL PURPOSE CATHODE RAY TUBES

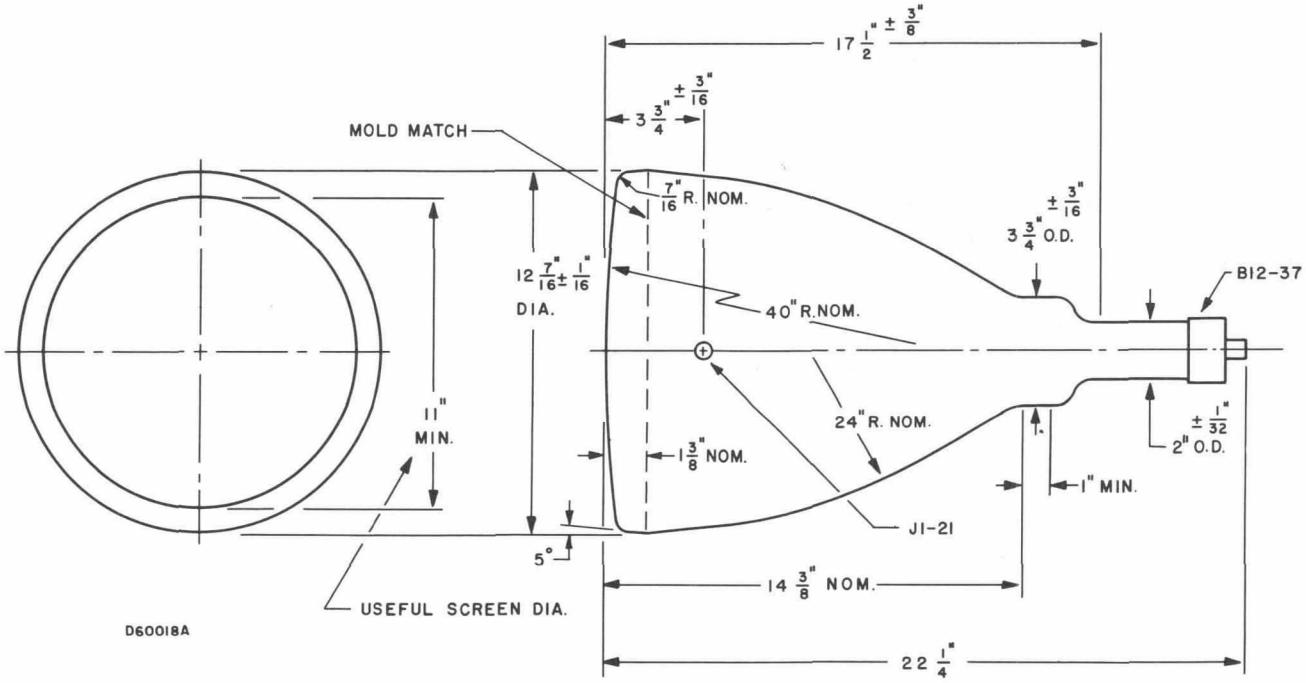
TYPICAL OPERATING CONDITIONS

Anode No. 3 Voltage	10,000 Volts	dc
Anode No. 2 Voltage	5000 Volts	dc
Anode No. 1 Voltage for Focus	1300 to 2200 Volts	dc
Grid No. 1 Voltage Required for Cutoff[2]	−60 to −100 Volts	dc
Deflection Factors[3]		
Deflecting Plates 1-2	105 to 145 Volts	dc/Inch
Deflecting Plates 3-4	80 to 115 Volts	dc/Inch
Modulation[4]	30 Volts	Max.
Line Width "A"[4]	.5 mm	
Focus Electrode Current[4]	−15 to +10 μa	dc
Spot Position, Undeflected	Within 30 mm Square	
Angle Between D1-D2 Trace and D3-D4 Trace	90 ± 2 Degrees	
Useful Scan (Centered on Tube Face)[5]	9¾ x 9¾ Inches	Min.

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
Resistance in Any Deflection Plate Circuit	5.0 Megohms Max.

NOTES:

1. *Anode input equals the product of Anode No. 2 voltage and average anode No. 2 current.*
2. *For visual extinction of undeflected focused spot.*
3. *Deflection plates 1 and 2 are nearer the screen.*
4. *Measured in accordance with MIL-E-1 specification at a post accelerator current (IA3) equal to 25 μa.*
5. *At EA3 = EA2, the entire useful screen area can be scanned.*

OUTLINE