



DESCRIPTION

The Sylvania Type SC-2840 is a 3-inch diameter, electrostatic focus and deflection cathode ray tube designed for compact analyzer equipment. It features short length and high brightness at low operating voltages.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Electrostatic
Phosphor*	P1
Fluorescence	Green
Persistence	Medium
Faceplate	Clear

*In addition to the P1 phosphor the SC-2840 can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	$0.6 \pm 10\%$ Ampere
Direct Interelectrode Capacitances (Approx.)	
Grid to All Other Electrodes	5.0 pf
Between Deflecting Plates 1-2	1.5 pf
Between Deflecting Plates 3-4	1.5 pf
Deflecting Plate 1 to All Other Electrodes ¹	6.5 pf
Deflecting Plate 2 to All Other Electrodes ¹	8.5 pf
Deflecting Plate 3 to All Other Electrodes ¹	5.5 pf
Deflecting Plate 4 to All Other Electrodes ¹	6.5 pf

MECHANICAL DATA

Minimum Useful Screen Diameter	$2\frac{3}{4}$ Inches
Base (Small-Shell Duodecal 10-Pin)	B10-75
or (Small-Shell Duodecal 12-Pin)	B12-43
Basing	12F

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

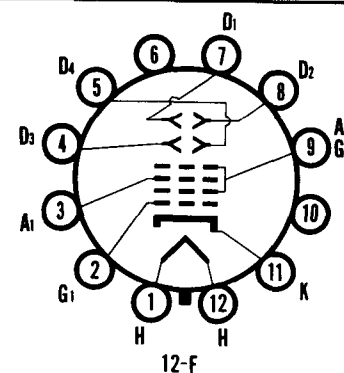
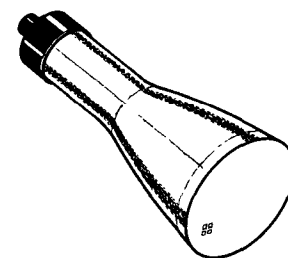
Anode No. 2 Voltage	2250 Volts dc
Anode No. 1 Voltage	1100 Volts dc
Grid Voltage	
Negative Bias Value	220 Volts dc
Positive Bias Value	0 Volt
Positive Peak Value	2 Volts
Peak Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	140 Volts
Heater Positive with Respect to Cathode	140 Volts
Peak Voltage Between Anode No. 2 and Any Deflection Plate	550 Volts

TYPICAL OPERATING CONDITIONS

Anode No. 2 Voltage ²	1200 Volts dc
Anode No. 1 Voltage for Focus ³	120 to 400 Volts dc
Grid Voltage Required for Cutoff ⁴	-42 to -90 Volts dc
Deflection Factor ^{5,6}	
Deflecting Plates 1-2 ⁷	210 to 290 Volts dc/Inch
Deflecting Plates 3-4 ⁸	180 to 260 Volts dc/Inch

QUICK REFERENCE DATA

Special Purpose Tube
3" Direct Viewed
Short Length
Round Glass Type
Electrostatic Deflection
Electrostatic Focus
High Brightness



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
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PAGE 1 OF 2

File Under

SPECIAL AND GENERAL
PURPOSE CATHODE RAY TUBES

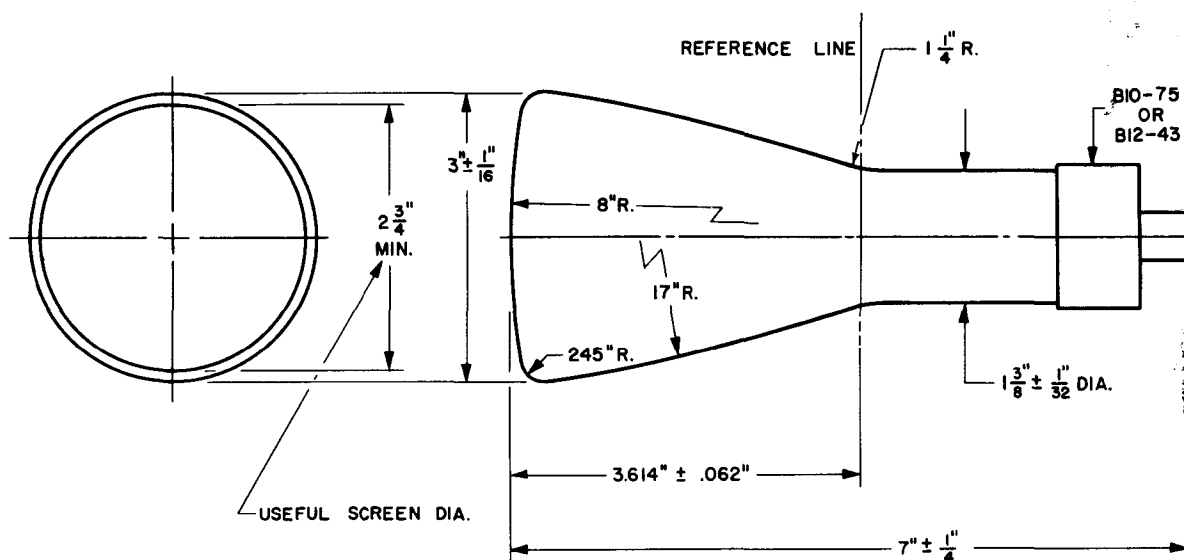
CIRCUIT VALUES

Grid Circuit Resistance	1.5 Megohms Max.
Deflection Circuit Resistance	5.0 Megohms Max.

NOTES:

1. Positive voltage on D1 with respect to D2 will move the spot approximately in the direction of Pin No. 4, $\pm 10^\circ$.
Positive voltage on D3 with respect to D4 will move the spot approximately in the direction of Pin No. 1.
2. Brilliance and definition decrease with decreasing Anode No. 2 Voltage. In general, Anode No. 2 Voltage should not be less than 1200 volts.
3. Eg set at 22.5 volts above spot cutoff.
4. Visual extinction of undeflected focused spot.
5. Angle between trace produced by plates D1-D2 and the plane through the tube axis and Pin No. 4 does not exceed 15° .
6. Angle between D1-D2 trace and D3-D4 trace is $90^\circ \pm 3^\circ$.
7. Deflecting Plates 1-2 are nearer the screen.
8. Deflecting Plates 3-4 are nearer the base.

OUTLINE



D60008