



SYLVANIA

engineering data series

SC-2854

DESCRIPTION

The Sylvania Type SC-2854 is a 5-inch diameter, electrostatic focus and 53° magnetic deflection cathode ray tube designed to meet the high visibility requirements for airborne radar. Its special phosphor attains high brightness levels with a spectral distribution closely matched to the eye's peak sensitivity while providing persistence characteristics similar to those of the more common radar screens.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflecting Method	Magnetic
Deflection Angle (Approx.)	53 Degrees
Phosphor	Aluminized Special Phosphor
Fluorescence	Blue
Persistence	Long
Faceplate	Clear

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current (Approx.)	0.6 Ampere
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes	5 pf
Grid No. 1 to All Other Electrodes	6 pf

MECHANICAL DATA

Minimum Useful Screen Diameter	4 $\frac{1}{4}$ Inches
Bulb Contact (Recessed Small Ball Cap)	J1-22
Base (Medium Shell Octal 8-Pin)	B8-11 or B8-65
Basing	8EF
Bulb Contact Aligns with Pin No. 5	±10 Degrees

RATINGS

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	0 Volt	
Positive Peak Value	0 Volt	
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	200 Volts	
Heater Positive with Respect to Cathode	200 Volts	

TYPICAL OPERATING CONDITIONS

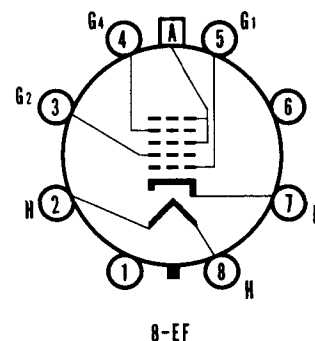
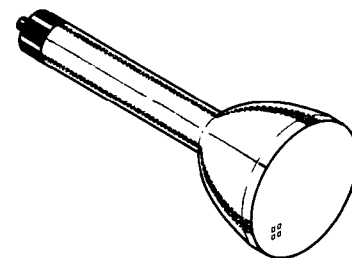
Anode Voltage ¹	7000 Volts	dc
Grid No. 4 Voltage for Focus ³	0 to +250 Volts	dc
Grid No. 2 Voltage	300 Volts	dc
Grid No. 1 Voltage ²	-33 to -77 Volts	dc
Line Width ^{3,4}	0.40 mm	Max.

CIRCUIT VALUES

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

Special Purpose Tube
5" Direct Viewed
Round Glass Type
Magnetic Deflection
Electrostatic Focus
High Resolution
High Visibility Screen



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

A Technical Publication

JUNE, 1964

PAGE 1 OF 2

File Under

SPECIAL AND GENERAL
PURPOSE CATHODE RAY TUBES

NOTES:

1. Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 4000 volts.
2. Visual extinction of undeflected focused spot.
3. With Eg1 adjusted for $I_b = 100 \mu a$ and beam focused for minimum width of individual lines at center of screen.
4. Measured by compressed raster method, using 35 to 105 line pattern.

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.

OUTLINE

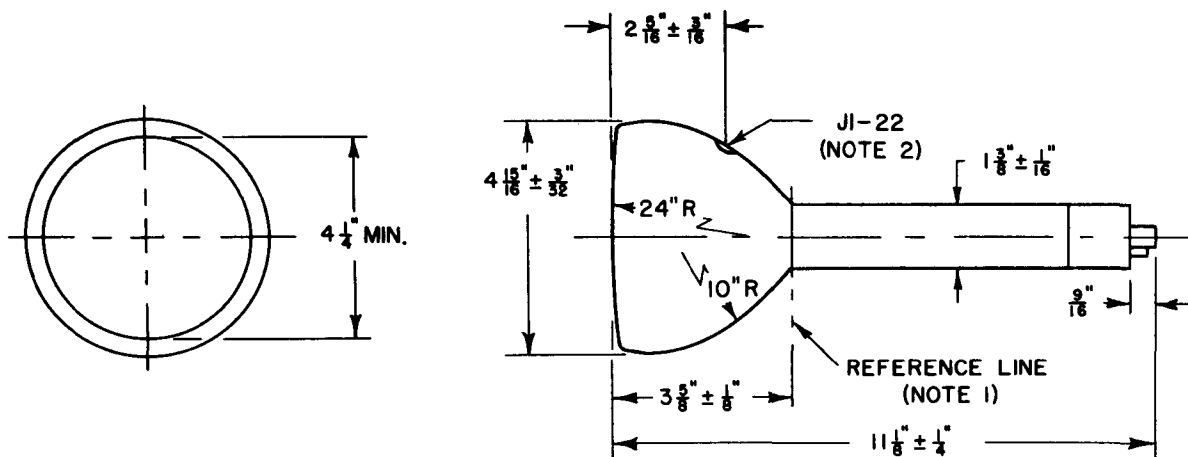


DIAGRAM NOTES:

1. Reference line is determined by the point where $1.430 \pm .003$ inch diameter ring gauge 2 inches long will stop.
2. Anode contact (J1-22) aligns with base pin No. 5, $\pm 10^\circ$.