

**DESCRIPTION**

The Sylvania SC-3525 is a 2-gun, electrostatically focused and deflected cathode-ray tube for displaying simultaneously two independently controlled traces. It features linear post deflection acceleration for maximum pattern linearity and deflection factor uniformity. All deflection plate leads are brought through the neck. The screen is aluminized for high brightness. Potted, flying leads are used in place of a conventional base to minimize overall length.

**CHARACTERISTICS**

**GENERAL DATA<sup>1</sup>**

Focusing Method	Electrostatic			
Deflection Method	Electrostatic			
Types*	SC-3525	SC-3525	SC-3525	SC-3525
	P1	P2	P7	P11
Fluorescence	Green	Blue-Green	Blue	Blue
Phosphorescence	—	Green	Yellow	—
Persistence	Medium	Long	Long	Short

*\*In addition to the types shown, the SC-3525- can be supplied with several other screen phosphors.*

**ELECTRICAL DATA**

Heater Voltage	6.3 Volts
Heater Current (2 Guns in Parallel)	1.08 to 1.32 Amperes
Direct Interelectrode Capacitances (Approx.)**	

	<b>Each Gun</b>
Cathode to All	5.5 pf
Grid No. 1 to All	6.5 pf
D1 to D2	2.0 pf
D3 to D4	2.0 pf
D1 to All Other Electrodes	7.0 pf
D2 to All Other Electrodes	7.0 pf
D3 to All Other Electrodes	7.0 pf
D4 to All Other Electrodes	7.0 pf

*\*\*Exclusive of the basing leads.*

**MECHANICAL DATA**

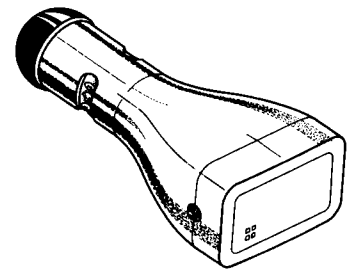
Overall Length	11 <sup>5</sup> / <sub>8</sub> ± 3 <sup>3</sup> / <sub>8</sub> Inches
Minimum Useful Screen Dimensions	2 1/4 x 4 1/8 Inches
Bulb Contact (Recessed Small Ball Cap)	J1-22
Basing	See Diagram
Base and Contact Alignment	See Diagram
Trace Alignment	
D1-D2 Trace Aligns with D3-D4 Trace (Each Gun)	90 ± 1 Degree
D1-D2 and D3-D4 Traces of the 2 Guns are Parallel	± 1 Degree

**MAXIMUM RATINGS (Absolute Maximum Values)**

Anode No. 2 Input	6 Watts	
Anode No. 3 Voltage	7260 Volts	dc
Anode No. 2 Voltage	3630 Volts	dc
Ratio to Anode No. 3 Voltage to Anode No. 2 Voltage	2.4:1	
Anode No. 1 (Focus Electrode) Voltage	1650 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value	220 Volts	dc
Positive Bias Value	0 Volt	dc
Positive Peak Value	2 Volts	dc
Peak Heater to Cathode Voltage		
Heater Negative with Respect to Cathode	200 Volts	
Heater Positive with Respect to Cathode	200 Volts	
Peak Voltage Between Anode and Astigmatism Electrode, or Any Deflecting Plate	750 Volts	

**QUICK REFERENCE DATA**

- Two Independent Guns
- 5 1/4" x 3 1/4" Direct Viewed
- Oscilloscope Tube
- Aluminized Screen
- Spiral Accelerator
- Rectangular Glass Type
- Electrostatic Focus
- Electrostatic Deflection
- Compact Size
- All Deflection Plate and Acceleration Leads Brought Through the Neck Wall



**FOR BASING  
SEE PAGE 3**

**SYLVANIA  
ELECTRONIC TUBES**

A Division of  
Sylvania Electric Products Inc.

**PICTURE TUBE  
OPERATIONS**

**SENECA FALLS, NEW YORK**

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File Under

SPECIAL AND GENERAL  
PURPOSE CATHODE RAY TUBES

**TYPICAL OPERATING CONDITIONS**

Anode No. 3 Voltage . . . . .	6000 Volts	dc
Anode No. 2 Voltage . . . . .	2750 Volts	dc
Focus Electrode Voltage . . . . .	730-540 Volts	dc
Grid No. 1 Voltage <sup>2</sup> . . . . .	-66 to -110 Volts	dc
Line Width "A" <sup>3</sup> . . . . .	0.018 Inches	Max.
Deflection Factors		
D1-D2 . . . . .	154-193 Volts Per Inch	
D3-D4 . . . . .	117-152 Volts Per Inch	
Deflection Factor Uniformity <sup>4</sup> . . . . .	3 Percent	Max.
Undelected Spot Positions <sup>5</sup> . . . . .	Within 5/8 Inch Square	
Useful Scan <sup>6</sup>		
D1-D2 . . . . .	±1.12 Inches	
D3-D4 . . . . .	±2.06 Inches	
Interaction Factor <sup>7</sup> . . . . .	5 x 10 <sup>-5</sup> In./Volts	Max.
Pattern Distortion <sup>8</sup>		
Maximum Ib <sub>3</sub> at Cutoff . . . . .	40 µadc	

**CIRCUIT VALUES**

Grid No. 1 Circuit Resistance . . . . .	1.5 Megohms	Max.
Deflection Circuit Resistance . . . . .	1.0 Megohm	Max.

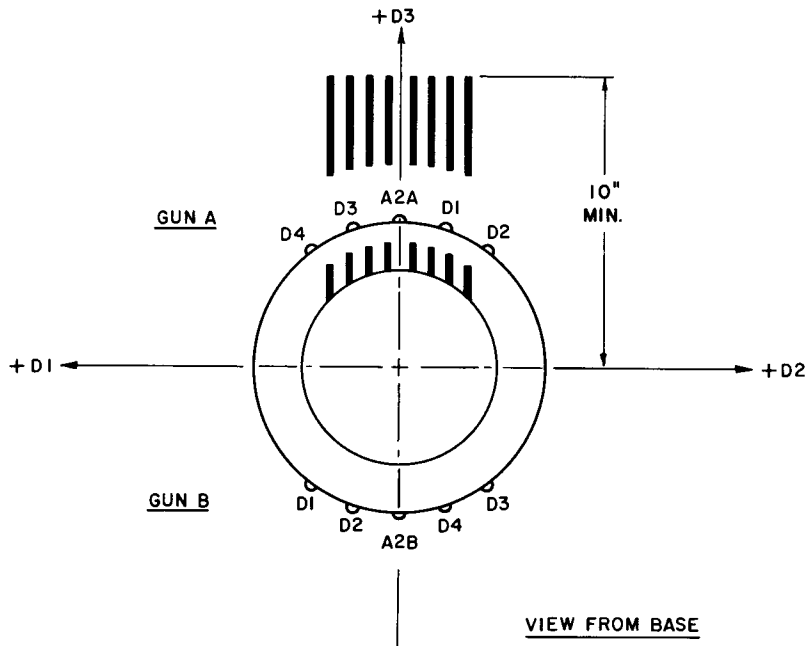
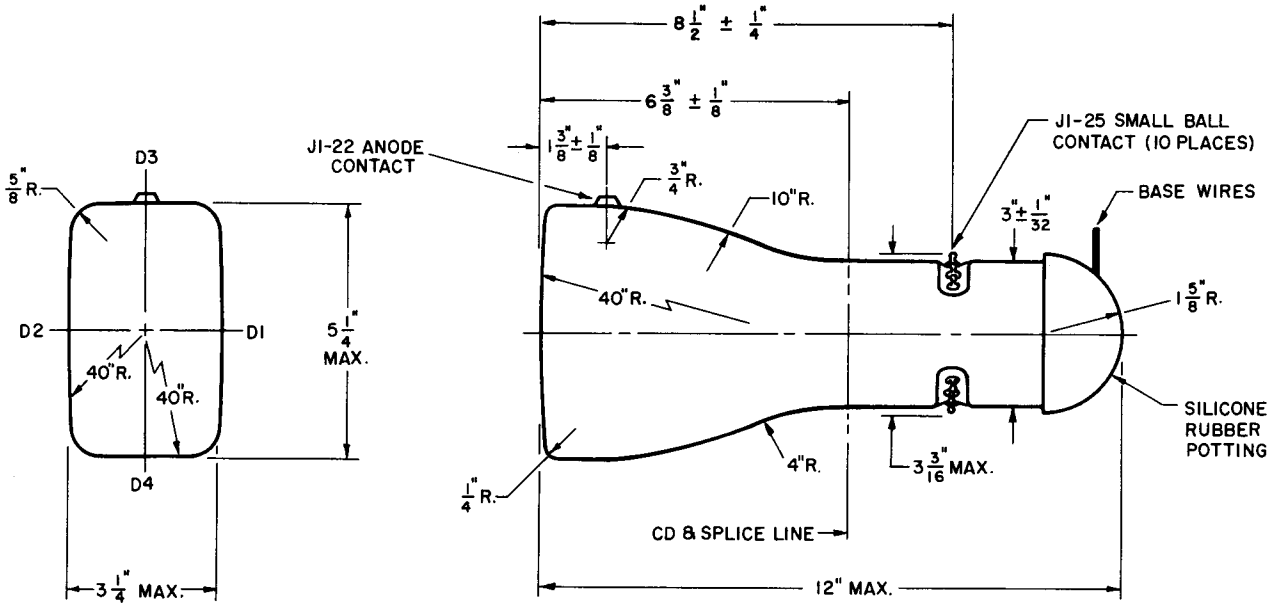
**NOTES:**

1. Values are for each gun unless otherwise specified.
2. Visual extinction of undeflected focused spot.
3. Per MIL-E-1 and at Ib<sub>3</sub> of 25µa. (This current shall be in addition to the value of Ib<sub>3</sub> read at cutoff.)
4. The deflection factor (for both D1-D2 and D3-D4 plate pairs separately) for a deflection of 75 % of the minimum useful scan will not differ from the deflection factor at 25 % of the minimum useful scan by more than the indicated value.
5. The shielded, undeflected focused spots will fall within a 5/8" square, the center of which coincides with geometric center of the tube face and the sides of which are parallel to the deflection axes.
6. Useful scan shall be measured from the center of the square as specified in Note 5 for spot centering.
7. The deflection of one beam when balanced dc voltages are applied to the deflection electrodes of the other gun shall be less than the specified value.
8. All portions of a raster pattern adjusted so its widest points just touch the sides of a 4.05 x 2.05 inch rectangle will fall within the area bounded by the 4.05 x 2.05 rectangle and an inscribed 3.95 x 1.95 rectangle.

**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**



**BASE WIRE COLOR CODE**  
From  
LEFT to RIGHT

- |        |       |      |
|--------|-------|------|
| BLACK  | ----- | H    |
| BROWN  | ----- | H    |
| YELLOW | ----- | K-A  |
| GREEN  | ----- | G1-A |
| ORANGE | ----- | A1-A |
| RED    | ----- | A1-B |
| BLUE   | ----- | G1-B |
| WHITE  | ----- | K-B  |

D63037

**VIEW FROM BASE**