

DESCRIPTION

Sylvania Types SC-3144 and SC-3154 are electrostatic charge printing tubes designed for use in high speed printing equipment. Each is a cathode-ray tube which has as a target for the beam, an array of fine, closely spaced wires extending through the bulb wall. Deflection and modulation of the beam striking the wires will produce charge patterns on a dielectric in contact with the outer surface of the tube.

In the printing application, a moving strip of paper, used as the dielectric, has charge patterns deposited on it which can be developed and fixed to produce permanent visual records. Both black-and-white and half-tone copy can be produced.

The fine focus beam, the small wire size and close spacing in the array, and the low capacitance between wire elements, permit high resolution along with extremely rapid printing. Both types can be used for single line scanning, and the .160" height of the array of the SC-3154 permits two-dimensional scanning for other methods of operation. The useful printing width of the array is 8.6 inches.

The SC-3144 and SC-3154 were developed for the A. B. Dick Company, 5700 West Touhy Avenue, Chicago 48, Illinois for use in their Videograph Data Presentation Systems.

ELECTRICAL DATA

Focusing Method	Magnetic
Deflection Method	Magnetic
Horizontal Deflection Angle (Approx.)	52 Degrees
Heater Current at 6.3 Volts	600 ± 30 Ma
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes	5 μμf
Grid No. 1 to All Other Electrodes	8 μμf

MECHANICAL DATA

Printing Head	
0.001" Diameter Conductive Elements Spaced	
Approximately 0.004" on Centers in Both Directions.	
Minimum Useful Printing Array Width	8.6 Inches
Minimum Useful Printing Array Height	
SC-3144	0.050 Inches
SC-3154	0.160 Inches
Array Thickness (Approx.)	0.50 Inches
Overall Length	26 ± 3/8 Inches
Width	10 3/8 ± 1/8 Inches
Height	3 7/16 + 1/16 - 1/8 Inches
Neck Length	17 ± 3/16 Inches
Neck Diameter	1 7/16 ± 1/16 Inches
Bulb Contact	C1-3
Base	B5-57
Basing	12D
Weight (Approx.)	6 Pounds

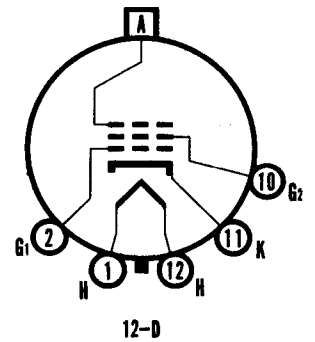
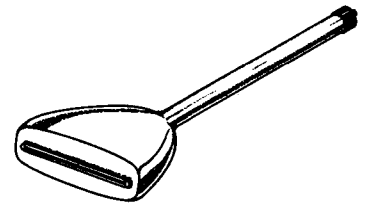
MAXIMUM RATINGS (Absolute Maximum System)

Unless Otherwise Specified, All Voltages are Positive with Respect to Cathode.

Maximum Anode Voltage	25,000 Volts	
Maximum Grid No. 2 Voltage	700 Volts	
Grid No. 1 Voltage		
Maximum Negative Value	155 Volts	dc
Maximum Negative Peak Value	200 Volts	
Maximum Positive Value	0 Volts	dc
Maximum Heater Voltage	6.9 Volts	
Minimum Heater Voltage	5.7 Volts	
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	200 Volts	
Heater Positive with Respect to Cathode	200 Volts	

QUICK REFERENCE DATA

- Electrostatic Charge
- Printing Tube
- Magnetic Deflection
- Magnetic Focus
- High Speed Printing
- High Resolution
- Min. Printing Dimensions:
- .05" x 8.6" (SC-3144)
- .16" x 8.6" (SC-3154)



SYLVANIA
ELECTRONIC TUBES

A Division of
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File Under
SPECIAL AND GENERAL PURPOSE
CATHODE RAY TUBES

TYPICAL OPERATING CONDITIONS — Grid Drive Service

Unless Otherwise Specified, All Voltages are Positive with Respect to Cathode.

Anode Voltage ¹	10,000 Volts	dc
Grid No. 2 Voltage	300 Volts	dc
Grid No. 1 Voltage (For Cutoff)	-40 to -77 Volts	dc
Focusing Coil Current ²	50 ± 10 Ma	dc

NOTES:

1. Anode voltage of 20,000 volts dc recommended for high resolution, two-dimensional scan on SC-3154.
2. For JEDEC Focus Coil No. 122 or equivalent, with the combined Grid No. 1 bias voltage and video-signal voltage adjusted to produce 100 µa anode current. Distance from the tube face to center of air gap on focus coil is 12 inches.

OUTLINE

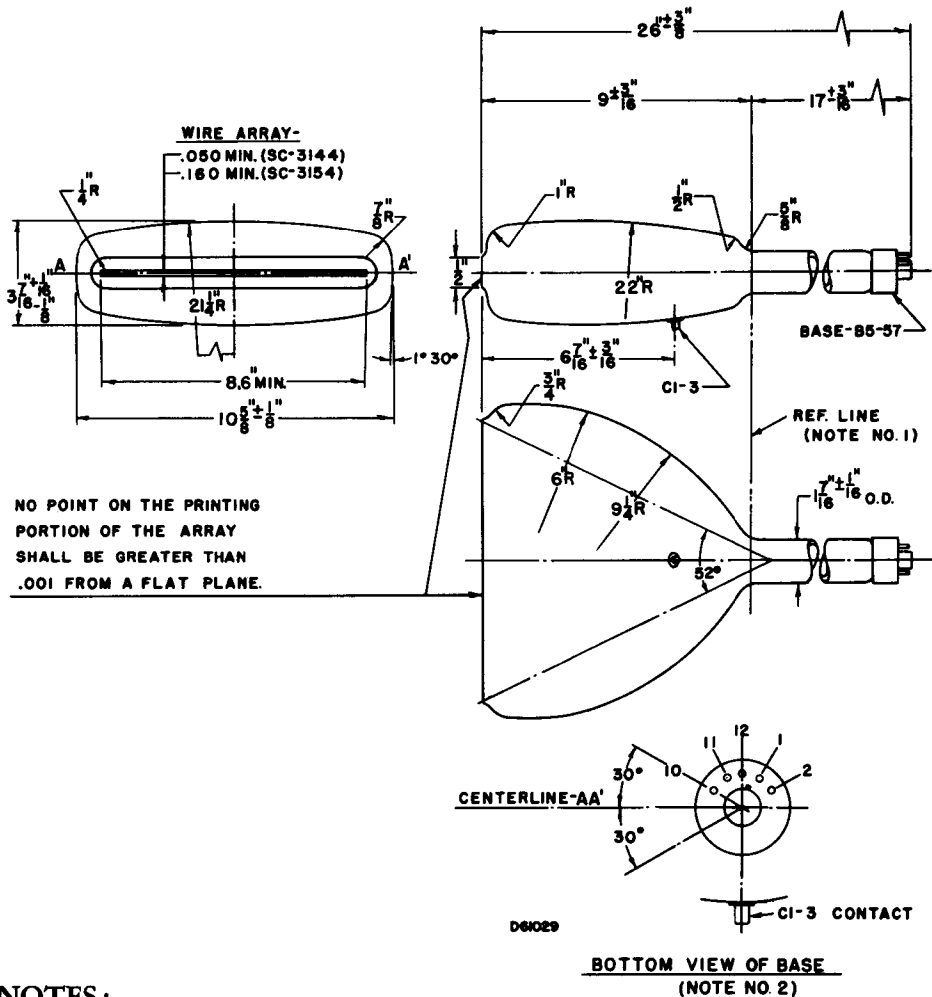


DIAGRAM NOTES:

1. Reference line determined by plane where JEDEC Gauge No. 112 (a cylinder 1.500" + .003" - .000" I.D. and 2" long) will stop against body of bulb.
2. Vacant base pin positions No. 3 and No. 9 align with horizontal centerline (A-A') within 30°. Base Key is on side opposite the anode contact (C1-3).