

## DESCRIPTION

Sylvania 5CVP- is a compact, rectangular, direct view cathode-ray tube designed primarily for use in airborne equipment. It features a high quality, nearly flat pressed faceplate, a high resolution electrostatic focus gun, 54 degree magnetic deflection, and neck diameter of .840 inches. Its encapsulated leads permit operation at high altitude, and it will withstand a wide range of temperatures.

## CHARACTERISTICS

### GENERAL DATA

|                             |               |
|-----------------------------|---------------|
| Focusing Method             | Electrostatic |
| Deflection Method           | Magnetic      |
| Deflection Angles (Approx.) |               |
| Horizontal                  | 52 Degrees    |
| Vertical                    | 27 Degrees    |
| Diagonal                    | 54 Degrees    |

| Phosphor Types* | Fluorescence                    | Phosphorescence | Persistence |
|-----------------|---------------------------------|-----------------|-------------|
| P1              | Green                           | —               | Medium      |
| P7              | Blue - White                    | Yellow          | Long        |
| P19             | Orange                          | Orange          | Very Long   |
| Faceplate       | Spherical, Clear, Pressed Glass |                 |             |

\* In addition to the types shown, the 5CVP- can be supplied with several other screen phosphors.

### ELECTRICAL DATA

|                                              |                        |
|----------------------------------------------|------------------------|
| Heater Voltage                               | 6.3 Volts              |
| Heater Current                               | $0.3 \pm 10\%$ Amperes |
| Direct Interelectrode Capacitances (approx.) |                        |
| Grid No. 1 to All                            | 12.0 $\mu\text{f}$     |
| Cathode to All                               | 9.5 $\mu\text{f}$      |

### MECHANICAL DATA

|                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| Minimum Useful Screen Dimensions (Maximum Assured) |                                                  |
| Horizontal                                         | 4 Inches                                         |
| Vertical                                           | 2 Inches                                         |
| Diagonal                                           | 4 $\frac{1}{8}$ Inches                           |
| Area                                               | 7.4 Sq. Inches                                   |
| Bulb                                               | C39 Exp. 3 or equivalent                         |
| Bulb Contact                                       | Special Molded Lead                              |
| Base                                               | Special Encapsulated Base with Color Coded Leads |
| Weight (Approx.)                                   | 1 $\frac{1}{4}$ Pounds                           |

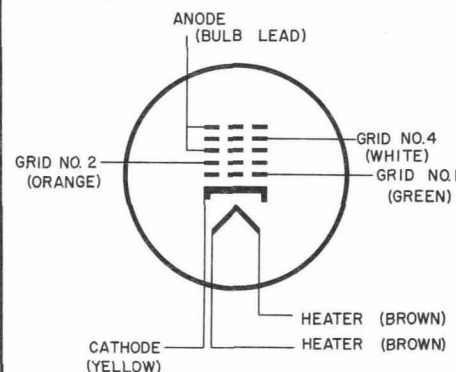
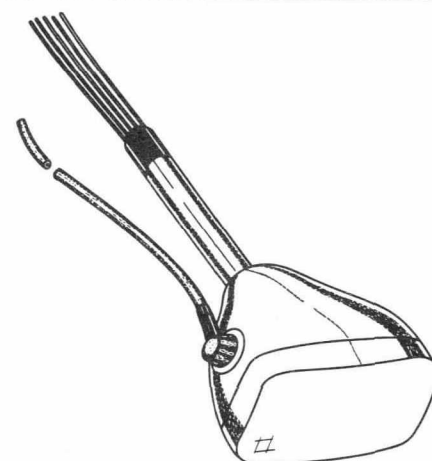
## RATINGS

### MAXIMUM RATINGS (Absolute Maximum Values)

|                                         |                     |    |
|-----------------------------------------|---------------------|----|
| Anode Voltage                           | 4500 Volts          | dc |
| Anode Input                             | 6 Watts             |    |
| Grid No. 4 Voltage (Focusing Electrode) | -500 to +1100 Volts | dc |
| Grid No. 2 Voltage                      | 550 Volts           | dc |
| Grid No. 1 Voltage                      |                     |    |
| Negative Bias Value                     | 165 Volts           | dc |
| Positive Bias Value                     | 0 Volts             | dc |
| Positive Peak Value                     | 2 Volts             |    |
| Peak Heater-Cathode Voltage             |                     |    |
| Heater Negative with Respect to Cathode | 180 Volts           |    |
| Heater Positive with Respect to Cathode | 180 Volts           |    |
| Altitude                                | 70,000 Feet         |    |
| Operating Temperature Range             | -65 to +85 °C       |    |

## QUICK REFERENCE DATA

Indicator Tube  
 $2\frac{3}{4} \times 4\frac{3}{4}$  Direct Viewed  
 Rectangular Glass Type  
 Magnetic Deflection  
 Electrostatic Focus  
 Encapsulated Leads  
 .840 O.D. Neck Diameter



## SYLVANIA ELECTRONIC TUBES

A Division of  
 Sylvania Electric Products Inc.

### PICTURE TUBE OPERATIONS SENECA FALLS, NEW YORK

Prepared and Released By The  
 TECHNICAL PUBLICATIONS SECTION  
 EMPORIUM, PENNSYLVANIA

APRIL, 1960

PAGE 1 OF 2

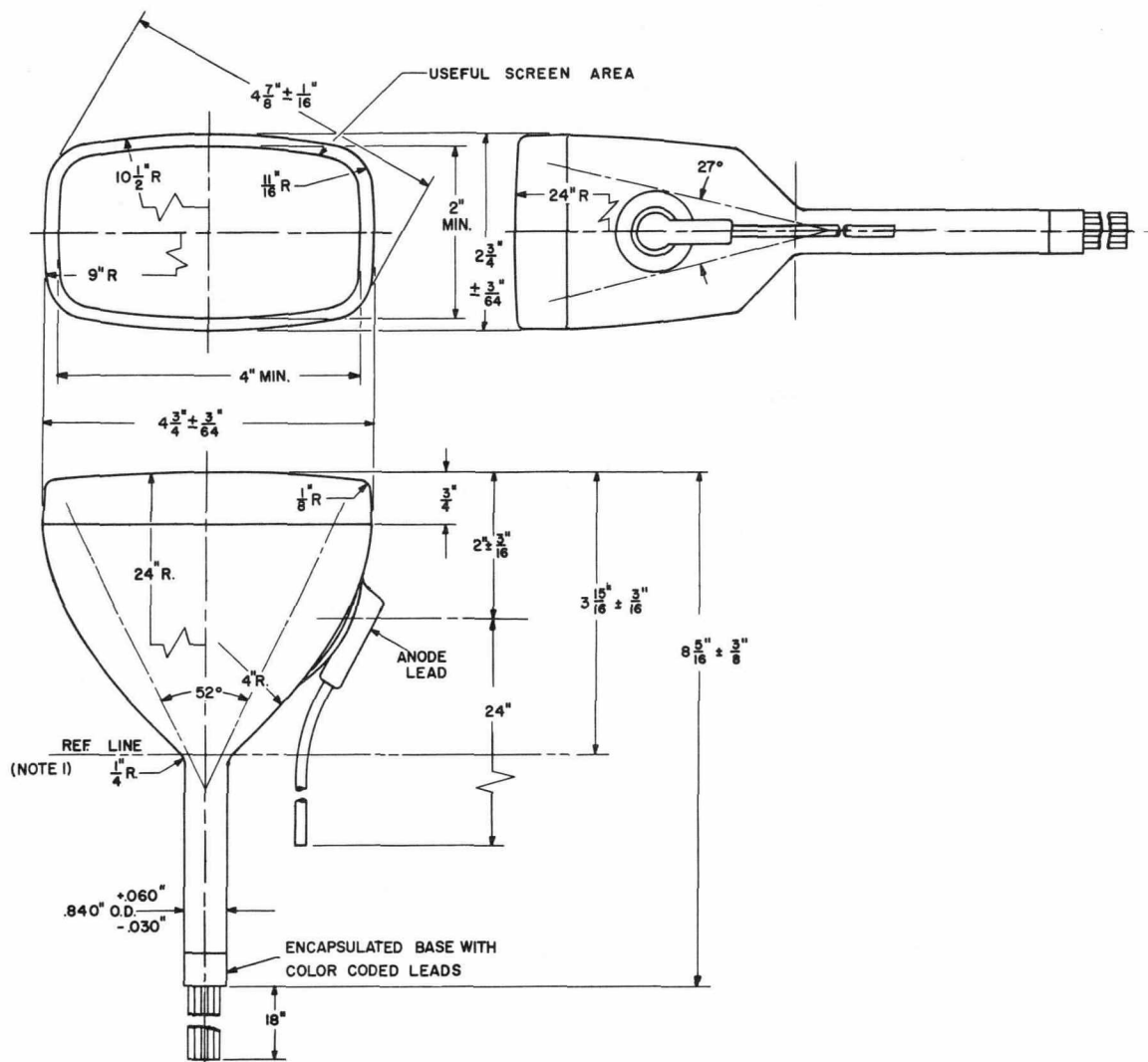
File Under  
 SPECIAL AND GENERAL PURPOSE  
 CATHODE RAY TUBES

## TYPICAL OPERATING CONDITIONS

|                                                                |                     |
|----------------------------------------------------------------|---------------------|
| Anode Voltage . . . . .                                        | 4000 Volts dc       |
| Grid No. 4 Voltage (Focusing Electrode) <sup>1</sup> . . . . . | 0 to +120 Volts dc  |
| Grid No. 2 Voltage . . . . .                                   | 300 Volts dc        |
| Grid No. 1 Voltage <sup>2</sup> . . . . .                      | -15 to -45 Volts dc |
| Modulation <sup>3</sup> . . . . .                              | 15 Volts dc Max.    |
| Line Width <sup>3</sup> . . . . .                              | .006 Inches Max.    |

## NOTES:

1. The horizontal deflection current is a triangular wave form of 1/4 cps at an amplitude sufficient to scan 3 3/4 inches. The vertical deflection current is a saw tooth of 1/120 cps at an amplitude sufficient to scan 1 5/8 inches. The control grid voltage is adjusted to produce a spot barely visible to dim lighting conditions. The beam is periodically unblanked to zero bias for a period of 500 μsecs at a repetition rate of 200-1000 pps. The focus electrode voltage for best focus under these pulsed conditions shall be as specified.
2. Visual extinction of undeflected focused spot.
3. Measured at a beam current of 10 μa, and in accordance with MIL-E-1 specifications.



D59089

## OUTLINE NOTE:

1. Reference line is determined by the plane where a gauge 1.000  $\begin{smallmatrix} +.003 \\ -.000 \end{smallmatrix}$  I.D. and 2" long will seat against the bulb body.