

### DESCRIPTION

The Sylvania SC-3875 is a 19" round rear window cathode ray tube intended for either simultaneously photographing the electron image or for optical projection of overlay information for comparator applications. It also features character writing deflection plates of high sensitivity for producing alpha-numeric symbols positioned with the main deflection yoke. The high resolution electron gun is designed for use with a single pole ion trap to eliminate ion blemishes. The optical viewing window has an approximate useful diameter of 2½ inches and is of ophthalmic quality.

### CHARACTERISTICS

#### GENERAL DATA

|                               |                   |
|-------------------------------|-------------------|
| Focusing Method               | Electrostatic     |
| Character Writing             | Electrostatic     |
| Deflection Method             | Magnetic          |
| Deflection Angles (Approx.)   | 50 Degrees        |
| Phosphor*                     | P14               |
| Fluorescence                  | Blue              |
| Phosphorescence               | Yellow-Orange     |
| Persistence                   | Medium to Long    |
| Faceplate                     | Gray Filter Glass |
| Light Transmittance (Approx.) | 75 Percent        |

\*In addition to the type shown, the SC-3875 can be supplied with several other phosphors.

#### ELECTRICAL DATA

|                                              |                   |
|----------------------------------------------|-------------------|
| Heater Voltage                               | 6.3 Volts         |
| Heater Current                               | 0.6 ± 10 % Ampere |
| Direct Interelectrode Capacitances (Approx.) |                   |
| Cathode to All Other Electrodes              | 5 pf              |
| Grid No. 1 to All Other Electrodes           | 6.5 pf            |
| D1 to D2                                     | 1.6 pf            |
| D3 to D4                                     | 1.6 pf            |
| Any One Plate to All                         | 4.5 pf            |
| Angle Between 1D2 and 3D4                    | 90 + 1 Degrees    |

#### MECHANICAL DATA

|                                          |                   |
|------------------------------------------|-------------------|
| Minimum Useful Screen Diameter           | 17 Inches         |
| Bulb Contact (Recessed Small Cavity Cap) | J1-21             |
| Neck Contacts (5)                        | 0.040" Diam. Wire |
| Base (Short Small Shell Duodecal 6-Pin)  | B6-203            |
| Basing                                   | See Diagram       |

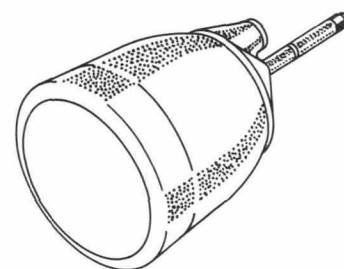
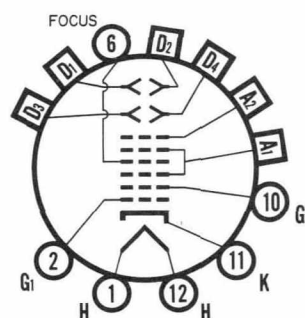
### RATINGS

#### MAXIMUM RATINGS (Absolute Maximum Values)

|                                                     |                     |
|-----------------------------------------------------|---------------------|
| Anode Voltage <sup>1</sup>                          | 18,000 Volts        |
| Grid No. 4 (Focusing Electrode) Voltage             | -500 to +1100 Volts |
| Grid No. 2 Voltage                                  | 700 Volts           |
| Grid No. 1 Voltage                                  |                     |
| Negative Bias Value                                 | 180 Volts           |
| Negative Peak Value                                 | 220 Volts           |
| Positive Bias Value                                 | 0 Volt              |
| Positive Peak Value                                 | 2 Volts             |
| Peak Heater-Cathode Voltage                         |                     |
| Heater Negative with Respect to Cathode             |                     |
| During Warm-up Period Not to Exceed 15 Seconds      | 450 Volts           |
| After Equipment Warm-up Period                      | 200 Volts           |
| Heater Positive with Respect to Cathode             | 200 Volts           |
| Peak Voltage Between Anode and Any Deflection Plate | 550 Volts           |

### QUICK REFERENCE DATA

19" Cathode Ray Tube  
Rear Viewing Window  
Electrostatic Focus  
Magnetic Deflection  
Electrostatic Character Writing  
Single Ion Trap



SC-3875

### SYLVANIA ELECTRIC PRODUCTS INC.

Electronic Components Group  
ELECTRONIC TUBE DIVISION  
SENECA FALLS, NEW YORK

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File Under

SPECIAL AND GENERAL  
PURPOSE CATHODE RAY TUBES

|                                                     |                           |        |
|-----------------------------------------------------|---------------------------|--------|
| Anode Voltage <sup>1</sup>                          | 15,000 Volts              | dc     |
| Grid No. 4 Voltage for Focus                        | 0 to +400 Volts           | dc     |
| Grid No. 2 Voltage                                  | 500 Volts                 | dc     |
| Grid No. 1 Voltage Required for Cutoff <sup>2</sup> | -35 to -72 Volts          | dc     |
| Deflection Factors (Approx.) <sup>3</sup>           |                           |        |
| D1-D2                                               | 170 Volts                 | dc/In. |
| D3-D4                                               | 185 Volts                 | dc/In. |
| Line Width at 20 FTL                                | 0.025 In.                 | Max.   |
| Spot Position                                       | Within 30 mm Diam. Circle |        |

|                                         |                  |
|-----------------------------------------|------------------|
| Grid No. 1 Circuit Resistance . . . . . | 1.5 Megohms Max. |
| Deflection Circuit Resistance . . . . . | 5 Megohms Max.   |

1. Connect both bulb and neck anode contacts to anode supply.
2. Visual extinction of focused raster. Extinction of the stationary spot will require that these values be about 5 volts more negative.
3. Useful electrostatic deflection is limited to  $\pm 1''$  on each axis.
4. 20 FTL measured in  $10'' \times 10''$  raster scanned with T.V. standards.

*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.*

[illegible]