



**Engineering Tube Division**

**DESCRIPTION**

The Sylvania SC-3821 is a 7" 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  $1\frac{5}{16}$  inches and is of ophthalmic quality.

**QUICK REFERENCE DATA**

Cathode Ray Tube  
Rear Viewing Window  
Electrostatic Focus  
Magnetic Deflection  
Ion Trap Design

**CHARACTERISTICS**

**GENERAL DATA**

Focusing Method . . . . .	Electrostatic
Deflection Method . . . . .	Magnetic
Phosphor* . . . . .	P14
Fluorescence . . . . .	Blue
Phosphorescence . . . . .	Orange
Persistence . . . . .	Medium

\*In addition to the type shown, the SC-3821 can be supplied with several other screen phosphors.

**ELECTRICAL DATA**

Heater Voltage . . . . .	$6.3 \pm 10\%$ Volts
Heater Current . . . . .	540 to 660 Ma
Direct Interelectrode Capacitances (Approx.)	
K to all . . . . .	5 pf
g1 to all . . . . .	6 pf

**MECHANICAL DATA**

Overall Length (Approx.) . . . . .	$17\frac{11}{16}$ Inches
Faceplate Diameter . . . . .	7 Inches
Minimum Useful Screen Diameter . . . . .	$6\frac{1}{8}$ Inches
Anode Terminal . . . . .	J1-22

**RATINGS**

**RATINGS (Absolute Maximum Values)**

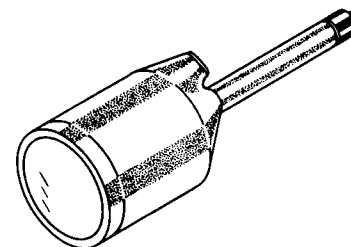
Anode Voltage . . . . .	13,200 Volts dc
Focus Electrode Voltage . . . . .	-550 to 1100 Volts dc
Grid No. 2 Voltage . . . . .	770 Volts dc
Grid No. 1 Voltage . . . . .	0 to -200 Volts dc

**TYPICAL OPERATING CONDITIONS**

Anode Voltage . . . . .	10,000 Volts dc
Focus Electrode Voltage . . . . .	0 to +300 Volts dc
Grid No. 2 Voltage . . . . .	300 Volts dc
Grid No. 1 Voltage for Cutoff . . . . .	-30 to -75 Volts dc
Line Width at $I_b = 25 \mu a$ . . . . .	0.010 Inch Max.

**CIRCUIT VALUES**

Grid No. 1 Circuit Resistance . . . . .	1.5 Megohms Max.
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**BASING**

- Pin 1 — Heater
- Pin 2 — Grid No. 1
- Pin 6 — Focus
- Pin 10 — Grid No. 2
- Pin 11 — Cathode
- Pin 12 — Heater

**SYLVANIA ELECTRIC PRODUCTS INC.**

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*File Under*

SPECIAL AND GENERAL  
PURPOSE CATHODE RAY TUBES

