



DESCRIPTION

Sylvania Type SC-3850 is a 5-inch diameter cathode ray tube designed for high resolution photographic recording using a fiber optics faceplate. An integral encapsulated high voltage connector is utilized to minimize corona at high altitude.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Magnetic
Deflection Method	Magnetic
Deflection Angle (Approx.)	50 Degrees
Type*	SC-3850
Phosphor	Fine Grain P11
Fluorescence	Blue
Persistence	Short
Faceplate	Fiber Optic Insert See Dwg.

*In addition to the type shown, the SC-3850 can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage	6.3 Volts	
Heater Current	$0.6 \pm 10\%$ Ampere	
Direct Interelectrode Capacitances (Approx.)		
Grid No. 1 to All Other Electrodes	10 pf	
Cathode to All Other Electrodes	5.5 pf	
External Conductive Coating to Anode	500 pf	Max.
	100 pf	Min.

MECHANICAL DATA

Minimum Useful Screen Area	4 x 1/4 Inches
Overall Length	16 3/4 Inches
Bulb	C40 Exp. 14 or Equivalent
Anode Terminal	16", HV Cable, Corona Protected
Base	Small Shell Duodecal 5-Pin B5-57
Basing	12N

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	15,000 Volts	dc
Anode Current (Eg1 = 0 Volt)	3.0 μ a	dc
Grid No. 2 Voltage	2500 Volts	dc
Grid No. 2 Current (Eg1 = 0 Volt)	2000 μ a	dc
Grid No. 1 Voltage		
Negative Bias Value	150 Volts	dc
Positive Bias Value	0 Volt	dc
Positive Peak Value	0 Volt	
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	165 Volts	
Heater Positive with Respect to Cathode	165 Volts	

TYPICAL OPERATING CONDITIONS

Anode Voltage	10,000 Volts	dc
Grid No. 2 Voltage	2000 Volts	dc
Grid No. 1 Voltage Required for Cutoff	-33 to -77 Volts	dc
Focusing Coil Current (Approx.)	100 Ma	
Line Width	0.0008 Inch	

CIRCUIT VALUES

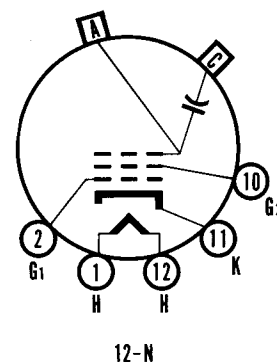
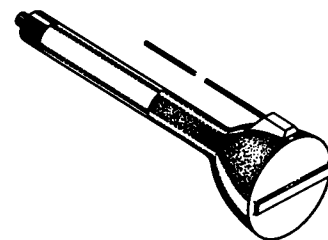
Grid No. 1 Circuit Resistance	1.5 Megohms Max.
-------------------------------	------------------

FIBER OPTICS SPECIFICATIONS

Size of Fiber Optics Insert	4 1/2" x 1/2" x 3/16"
Fiber Size	5 Microns
Numerical Aperture	0.84

QUICK REFERENCE DATA

5" Fiber Optics Tube
Magnetic Focus
Magnetic Deflection
Integral H.V. Connector
For Very High Resolution
Photographic Recording



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

A Technical Publication

APRIL, 1964

PAGE 1 OF 2

File Under

SPECIAL AND GENERAL
PURPOSE CATHODE RAY TUBES

OUTLINE

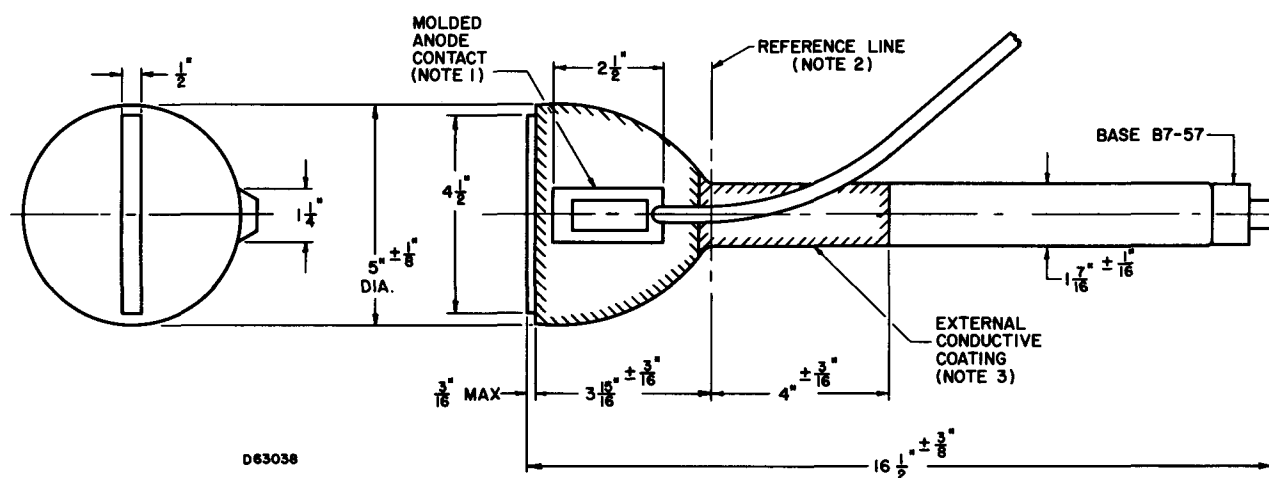


DIAGRAM NOTES:

1. The plane through the tube axis and vacant pin position No. 3 may vary from the plane through the axis and centerline of molded anode contact by an angular tolerance (measured about the tube axis) of $\pm 30^\circ$. Molded anode contact is on same side as vacant pin No. 3.
2. Reference line is determined by the plane C-C' of reference line gauge (JEDEC No. G112), when gauge is seated on the glass cone.
3. External conductive coating must be grounded.