

DESCRIPTION

The Sylvania Type SC-3890 is a 10-inch diameter Cathode Ray Tube designed for high resolution photographic recording. Its electron-optical system and fine grain screen achieve very fine trace width with conventional focusing and deflection units and a simple beam-centering magnet. The tube has a flat, clear, non-browning optical glass faceplate for optimum photographic quality.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Magnetic
Deflection Method	Magnetic
Deflection Angle (Approx.)	50 Degrees
Phosphor	P11
Fluorescence	Blue
Phosphorescence	Blue
Persistence	Short
Faceplate	Flat, Non Browning Optical Glass

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	$0.6 \pm 10\%$ Ampere
Direct Interelectrode Capacitance (Approx.)	
Cathode to All Other Electrodes	5 pf
Grid No. 1 to All Other Electrodes	6 pf

MECHANICAL DATA

Minimum Useful Screen Diameter	9 Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base (Small Shell Duodecal 6-Pin)	B5-57
Basing	12N
Bulb Contact Aligns with Vacant Pin	
Position No. 3	± 10 Degrees

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	25,000 Volts dc
Grid No. 2 Voltage	2500 Volts dc
Grid No. 1 Voltage	
Negative Bias Value	150 Volts dc
Positive Bias Value ¹	0 Volt
Positive Peak Value	0 Volt
Peak Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	200 Volts dc
Heater Positive with Respect to Cathode	200 Volts dc

TYPICAL OPERATING CONDITIONS

Anode Voltage	20,000 Volts dc
Grid No. 2 Voltage	2000 Volts dc
Grid No. 1 Voltage for Cutoff ²	-33 to -77 Volts dc
Line Width at $I_b = 5 \mu a$	0.002 Inch

CIRCUIT VALUES

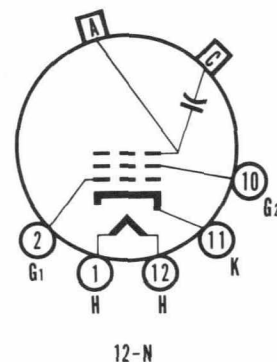
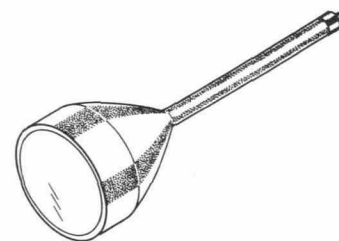
Grid No. 1 Circuit Resistance	1.5 Megohms Max.
-------------------------------	------------------

NOTES:

1. At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts. To prevent burning, minimum beam current densities should be employed.
2. Visual extinction of undeflected focused spot.

QUICK REFERENCE DATA

High Resolution Tube
0.002" Line Width
10-Inch, Flat, Optical Glass Faceplate
Clear Non-Browning Faceplate
Extremely Fine Grain Screen
Magnetic Deflection
Magnetic Focus
No Ion Trap



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

A Technical Publication

JUNE, 1964

PAGE 1 OF 2

File Under
SPECIAL AND GENERAL
PURPOSE CATHODE RAY TUBES

WARNING:

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.

OUTLINE

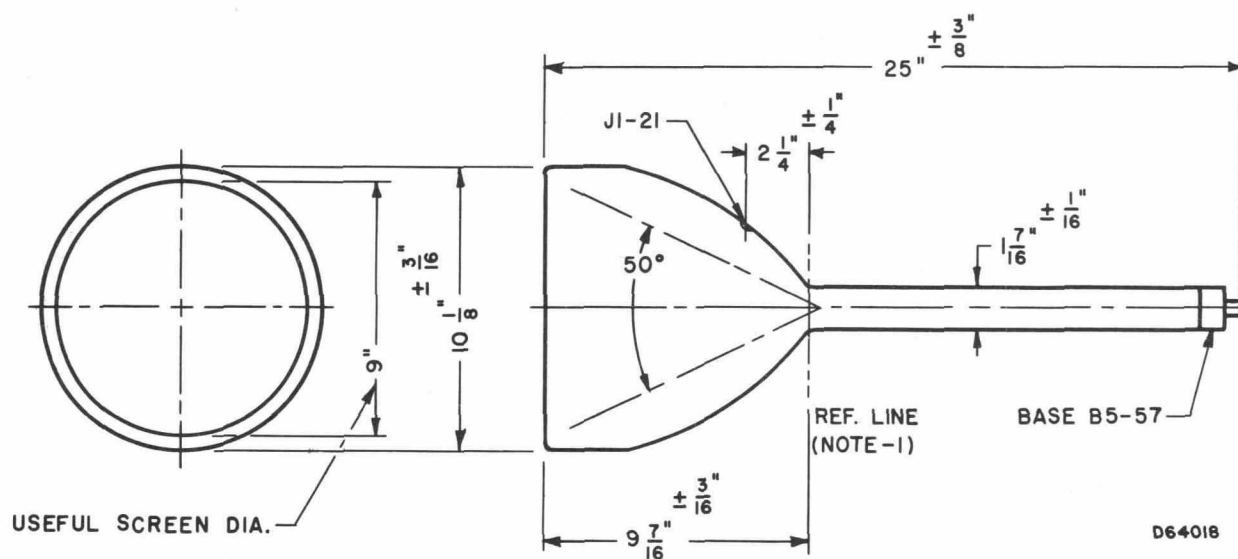


DIAGRAM NOTE:

1. Reference Line is the point where a 1.500" $\pm$ 0.003" - 0.000" diameter ring gauge 2" long will stop against the bulb.