DESCRIPTION

The Sylvania Types 5CEP11 and 5CEP16 are 5-inch diameter Cathode Ray Tubes designed for high resolution photographic recording and high resolution flying spot scanning applications respectively. They have electrostatic focus, magnetic deflection, and are capable of producing a line width of 0.0015 inch. The tubes have flat, neutral gray, non-browning optical glass faceplates for optimum photographic quality. Both types have aluminized phosphors to increase display brightness. An integral encapsulated high voltage connector is utilized to minimize corona at high altitude.

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angle (Approx.)	42 Degrees	
	5CEP16	**5CEP11**
Phosphor*	P16	Fine Grain P11, Aluminized
Fluorescence	Violet and Near Ultra-Violet	Blue
Persistence	Extremely Short	Short
Faceplate	Gray, Non-Browning Optical Glass	

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

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 ± 10 % Ampere
Direct Interelectrode Capacitances (Approx.)	
Grid No. 1 to All Other Electrodes	9 pf
Grid No. 2 to All Other Electrodes	7 pf
Cathode to All Other Electrodes	7 pf

MECHANICAL DATA

Minimum Useful Screen Diameter	4¼ Inches
Overall Length	13 ± ½ Inches
Bulb Diameter	5¼ ± 1/16 Inches
Anode Terminal	16″ HV Cable, Corona Protected
Base	B6-63
Basing	12Q

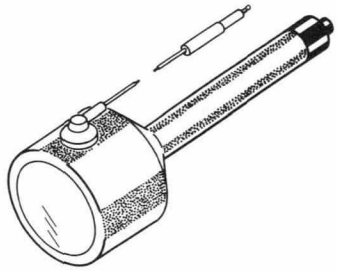
RATINGS

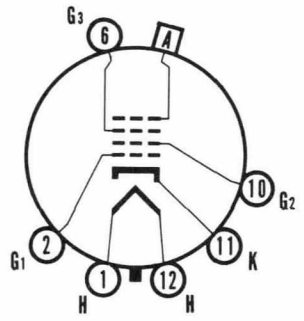
MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	22,000 Volts dc
Grid No. 3 (Focus) Voltage	5000 Volts dc
Grid No. 2 Voltage	600 Volts dc
Grid No. 1 Voltage	
Negative Bias Value	180 Volts dc
Positive Bias Value	0 Volt
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 Period	180 Volts
Heater Positive with Respect to Cathode	180 Volts

QUICK REFERENCE DATA

High Resolution Tube
.0015″ Line Width
5-Inch, Flat, Optical Glass Faceplate
Clear Non-Browning Faceplate
Extremely Fine Grain Screen
Aluminized Screen
Magnetic Deflection
Electrostatic Focus
No Ion Trap





12-Q

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

TYPICAL OPERATING CONDITIONS

Anode Voltage	10,000	20,000 Volts
Grid No. 3 (Focus) Voltage[1]	2070-2370	4140-4740 Volts
Grid No. 2 Voltage	300	300 Volts
Grid No. 1 Cutoff Voltage[2]	−40 to −65	−40 to −65 Volts
Line Width[3]	0.0015	0.0015 Inch

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.

NOTES:

1. *The Grid No. 3 focus supply should be capable of 250 μa average current. Due to the extreme fineness of the line, it is recommended that focus modulation (dynamic focus) be used.*
2. *Visual extinction of undeflected focused spot.*
3. *Line width measured at 5 μa by the shrinking raster method.*

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 of 16,000 volts, whichever is less.

OUTLINE

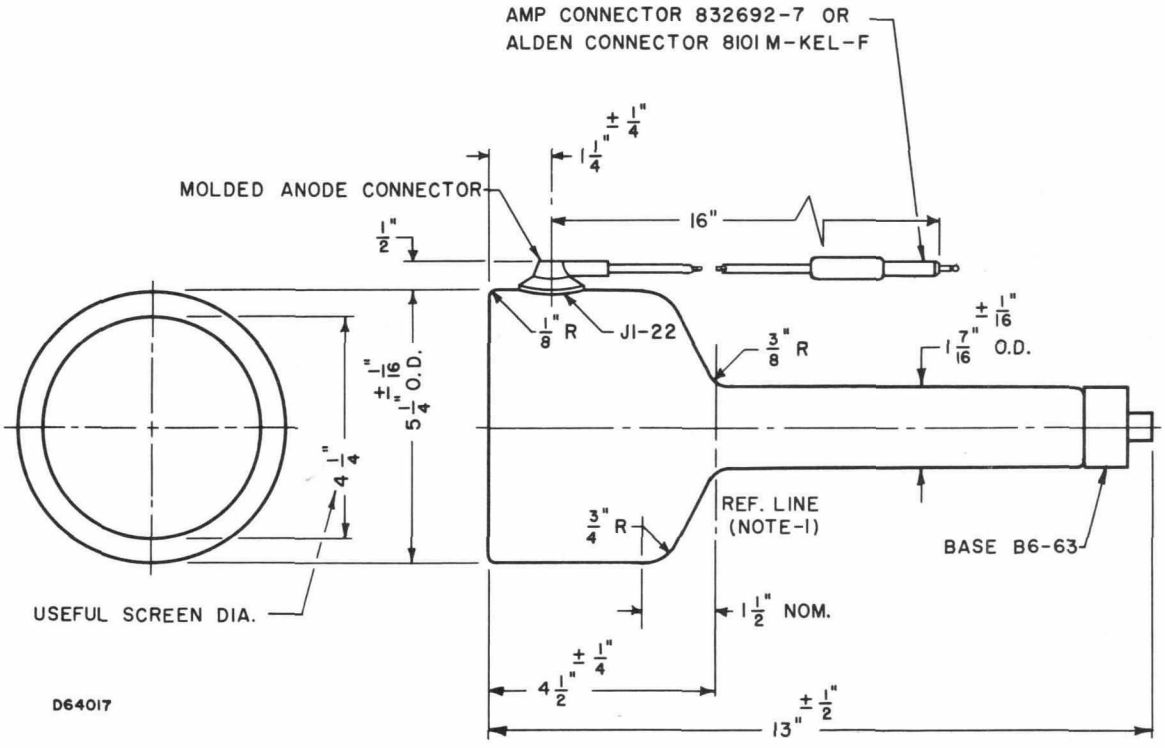

DIAGRAM NOTES:

1. *Yoke Reference Line is the plane where a 1.500" + 0.003", −0.000" I.D. Ring Gage will stop.*
2. *Molded Anode Connector alignment with vacant pin Position No. 3 has angular tolerance of ±10° measured about the tube axis.*