



TENTATIVE DATA

DESCRIPTION

The Sylvania SC3895 is a 19" round, console display tube for large screen visual readout of alphanumeric and vector information. It employs advanced designs for high resolution and brightness at very high writing rates. The SC3895 features an aluminized screen, post deflection acceleration, and deflection plate leads brought out through the neck for low deflection inductance and capacitance.

GENERAL DATA

Focusing Method	Electrostatic
Deflecting Method	Electrostatic
Phosphor* Spectral Energy Distribution of P28	
Fluorescence	Yellow-Green
Phosphorescence	Yellow-Green
Persistence	Long
Faceplate	Gray Filter Glass
Transmittance (Approx.)	76 Percent

* In addition to the screen shown, the SC3895 can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage	6.3	Volts
Heater Current	0.6 ± 10%	Amperes
Direct Interelectrode Capacitances (Approx.)		
Cathode to All Other Electrodes	7.5	pf
Grid No. 1 to All Other Electrodes	14.0	pf
Between Deflecting Plates 1-2	6.4	pf
Between Deflecting Plates 3-4	2.5	pf
Deflecting Plate 1 to All Other Electrodes	13.7	pf
Deflecting Plate 2 to All Other Electrodes	13.7	pf
Deflecting Plate 3 to All Other Electrodes	5.7	pf
Deflecting Plate 4 to All Other Electrodes	5.7	pf
Grid No. 2 to All Other Electrodes	13.5	pf

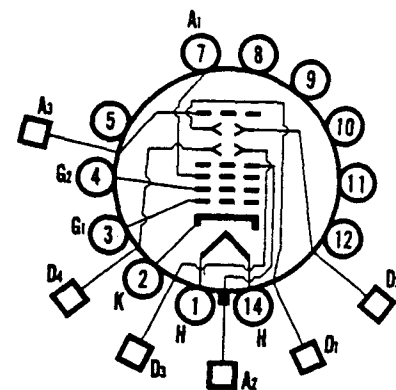
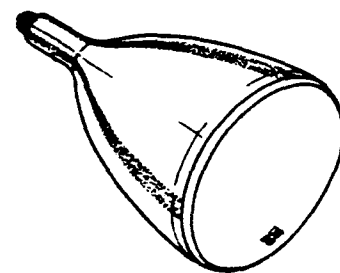
MECHANICAL DATA

Minimum Useful Screen Diameter	18	Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Neck Contacts (Small Ball)	J1-25	
Base (Medium Shell Diheptal 14-Pin)	B12-37	

These are tentative data only. Sylvania, by the publication thereof, is under no obligation as to future manufacture of the product herein described nor as to adherence to these data in case of such future manufacture.

QUICK REFERENCE DATA

Character Writing Tube
19" Direct Viewed
Round Glass Type
Electrostatic Deflection
Electrostatic Focus
Post Deflection Acceleration
Aluminized Screen



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

A Technical Publication

April 29, 1965
Page 1 of 4

MECHANICAL DATA (Continued)

J1-21 Contact and Base Key Aligns with Trace D1-D2	±10	Degrees
D3-D4 Trace Aligns with Pin No. 11	±10	Degrees
Angle Between D1-D2 and D3-D4 Traces	90 ± 1	Degrees

RATINGS

MAXIMUM RATINGS (Absolute Maximum Ratings).

Anode Input	6	Watts
Anode No. 3 (Post Accelerator) Voltage	19,800	Volts dc
Anode No. 2 Voltage ¹	11,000	Volts dc
Anode No. 1 (Focusing Electrode) Voltage	8,000	Volts dc
Grid No. 1 Voltage		
Negative Bias Value	200	Volts dc
Positive Bias Value	0	Volt dc
Positive Peak Value	0	Volt
Grid No. 2 Voltage	800	Volts dc
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	180	Volts
Heater Positive with Respect to Cathode	180	Volts
Peak Voltage Between Anode No. 2 and Any Deflecting Plate	1500	Volts
Ratio Post Accelerator Voltage to Anode Voltage	2:1	

TYPICAL OPERATING CONDITIONS

Anode No. 3 (Post Accelerator) Voltage	18,000	Volts dc
Anode No. 2 Voltage	10,000	Volts dc
Grid No. 2 Voltage	500	Volts dc
Anode No. 1 Voltage for Focus	4800 to 5200	Volts dc
Grid No. 1 Voltage Required for Cutoff	-50 to -150	Volts dc
Deflection Factors		
Deflecting Plates 1-2	90 to 140	Volts dc/Inch
Deflecting Plates 3-4	90 to 140	Volts dc/Inch
Modulation at 17.7 FTL ²	50	Volts Max.
Light Output Center ²	17.7	FTL Min.
Line Width ³⁻⁴		
Center	0.025	Inch
Corners	0.040	Inch
Spot Position	1.5	Inch
Spot Displacement	0.4	Inch
Focus Correction ³⁻⁴	0 to 1000	Volts Max.
Astigmatism Correction ³⁻⁴	0 to 350	Volts Max.

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Megohms Max.
Resistance in Any Deflection Plate Circuit ¹	1.0	Megohms Max.

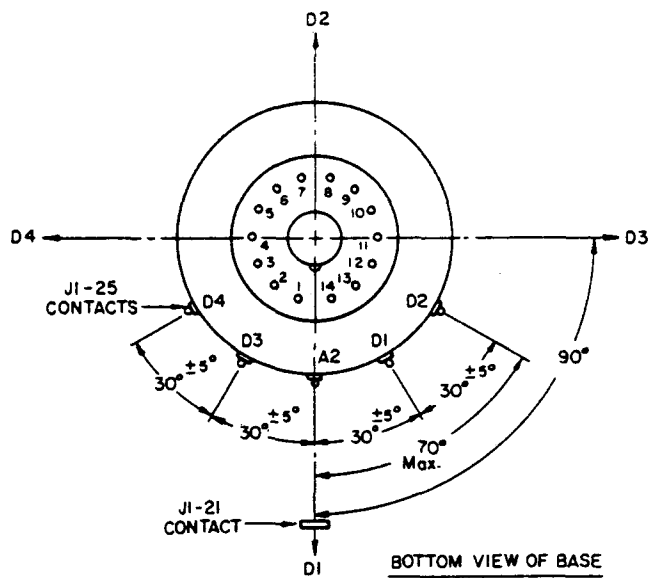
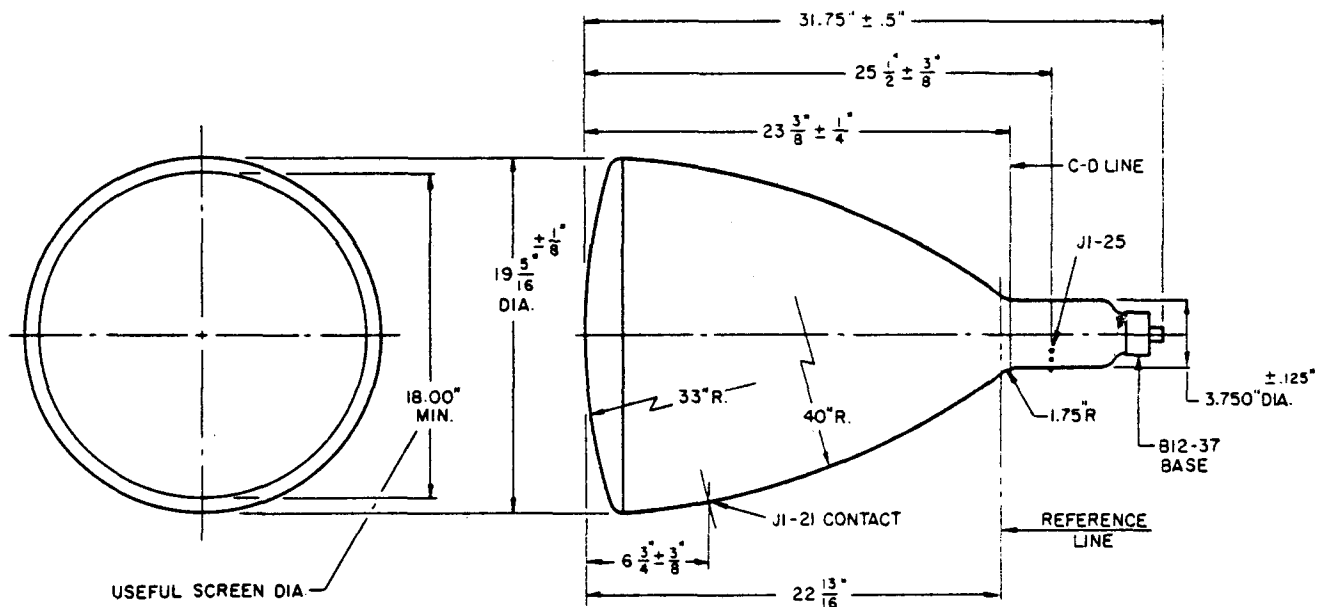
NOTES:

1. The deflection electrode circuit resistances shall be less than 30,000 ohms.
2. Using a Spectra Spot Brightness Meter or equivalent and writing at 850,000 inch/sec. with a repetition rate of 60 cycles. Minimum light output will be as specified.
3. Line width within a 4-inch circle will be considered as center, the remaining area within a centered 12.6 inch square will be considered Line Width at corners. Line Width measurements will be taken per Note 2 using 5 FTL as the light output level.
4. Line Width test made with dynamic focus and astigmatism. Both focus and astigmatism may change from the center value to some value within the values specified.

X-RAY 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 anode voltage or 16,000 volts, whichever is less.

OUTLINE



065010