

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 |

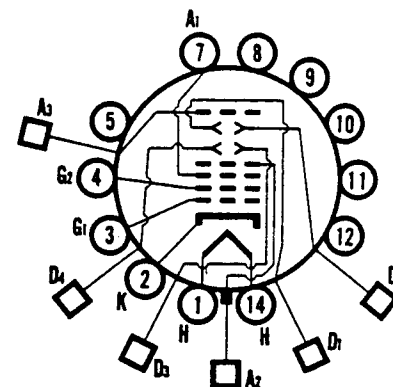
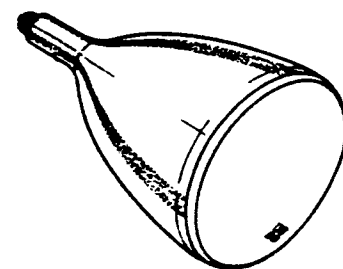
MECHANICAL DATA

| | | |
|--|--------|--------|
| 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



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 ELECTRONIC TUBE DIVISION
 SENECA FALLS, NEW YORK

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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. |

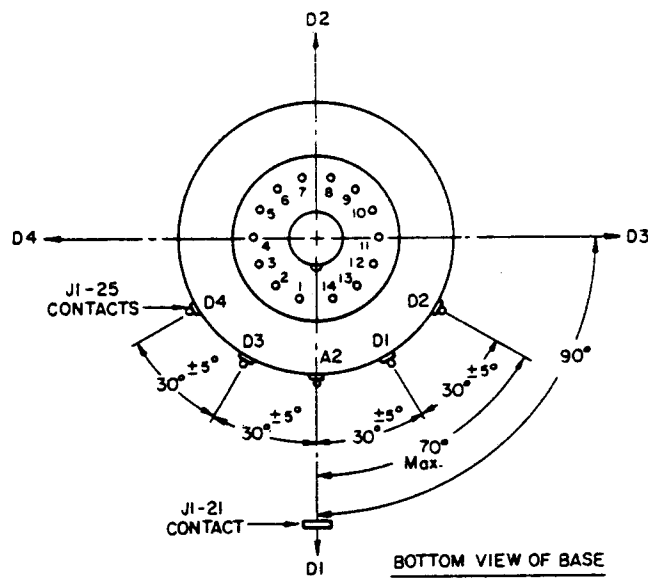
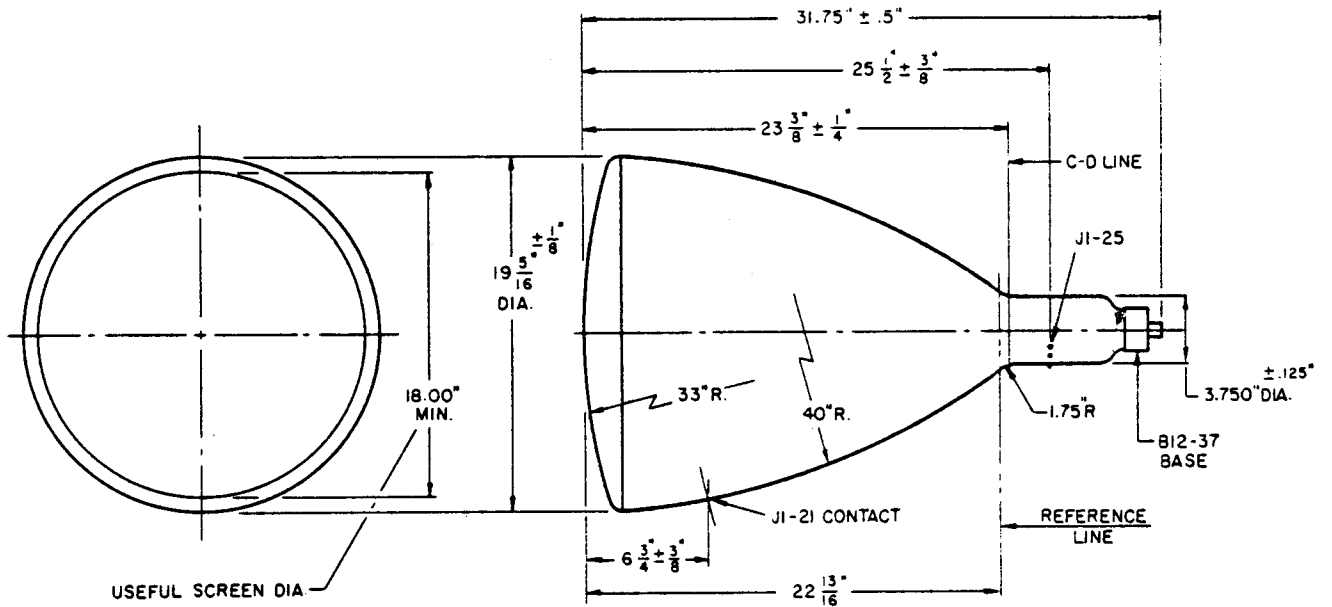
NOTES:

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