DESCRIPTION

The Sylvania Types SC-3507, SC-3800 and SC-3876 are Cathode Ray Tubes with fiber optic strips inserted into the faceplate. They are intended for application of high resolution photographic recording. The fiber optics strip has an approximate active area 8 11/16 inches long by ½ inch wide. The electron-optical system and fine grain screen achieve a very fine trace width with conventional focusing and deflection units and a simple beam centering magnet.

CHARACTERISTICS

GENERAL DATA

	SC-3507 SC-3876	SC-3800	
Focusing Method	Magnetic	Electrostatic	
Deflection Method	Magnetic	Magnetic	
Deflection Angle (Approx.)	55	55	Degrees
Phosphor (Fine Grain Aluminized)	P11	P11	
Fluorescence	Blue	Blue	
Persistence	Short	Short	
Faceplate	Fiber Optics	Fiber Optics	

MECHANICAL DATA

Overall Length	See Drawing
Neck Diameter	1 7/16 Inches
Face Dimensions	3½ x 10 Inches
Bulb Contact	J1-21
Base	See Drawing

FIBER OPTICS DATA

Useful Screen Size	½ x 8 11/16 Inches
Fiber Size (Single Clad)	8-20 Microns
Numerical Aperture	0.8

RATINGS

MAXIMUM RATINGS (Absolute Values)

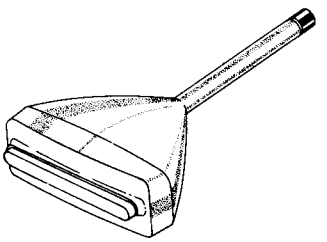
	SC-3507	SC-3800	SC-3876	
Anode Voltage	25,000	10,500	10,500	Volts
Focus Electrode Voltage	—	2500	—	Volts
Grid No. 2 Voltage	2500	770	2500	Volts
Grid No. 1 Voltage	0 to −150	0 to −150	0 to −150	Volts
Peak Heater Cathode Voltage				
Heater Negative with Respect to Cathode				
During Warm-up Period Not to Exceed 15 Secs.	450	400	400	Volts
After Equipment Warm-up	165	165	165	Volts
Heater Positive with Respect to Cathode	165	165	165	Volts

TYPICAL OPERATING CONDITIONS

Heater Voltage	6.3	6.3	6.3 Volts	
Heater Current	0.6 ± 10 %	0.6 ± 10 %	0.6 ± 10 % Amp	
Anode Voltage[4]	20,000	10,000	10,000 Volts	
Focus Voltage	—	1500-2500	— Volts	
Focus Electrode Current at Ib = 5 μa	—	50	— μa	Max.
Grid No. 2 Voltage	2000	500	2000 Volts	
Grid No. 1 Voltage for Cutoff[1]	−33 to −77	−33 to −77	−33 to −77 Volts	
Focusing Coil Current (Approx.)[2]	100	—	80 Ma	
Line Width[3]	0.002	0.005	0.004 Inch	Max.

QUICK REFERENCE DATA

Fiber Optics Tubes
High Resolution
Active Area 8½" x ½"
Very Fine Trace
Focusing
SC-3507 and SC-3876—Magnetic
SC-3800—Electrostatic
Deflection—Magnetic



BASING

	SC-3507 SC-3876 Pin No.	SC-3800 Pin No.
Heater	1	1
Grid No. 1	2	2
Focus	—	6
Grid No. 2	10	10
Cathode	11	11
Heater	12	12

SYLVANIA ELECTRIC PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
SENECA FALLS, NEW YORK

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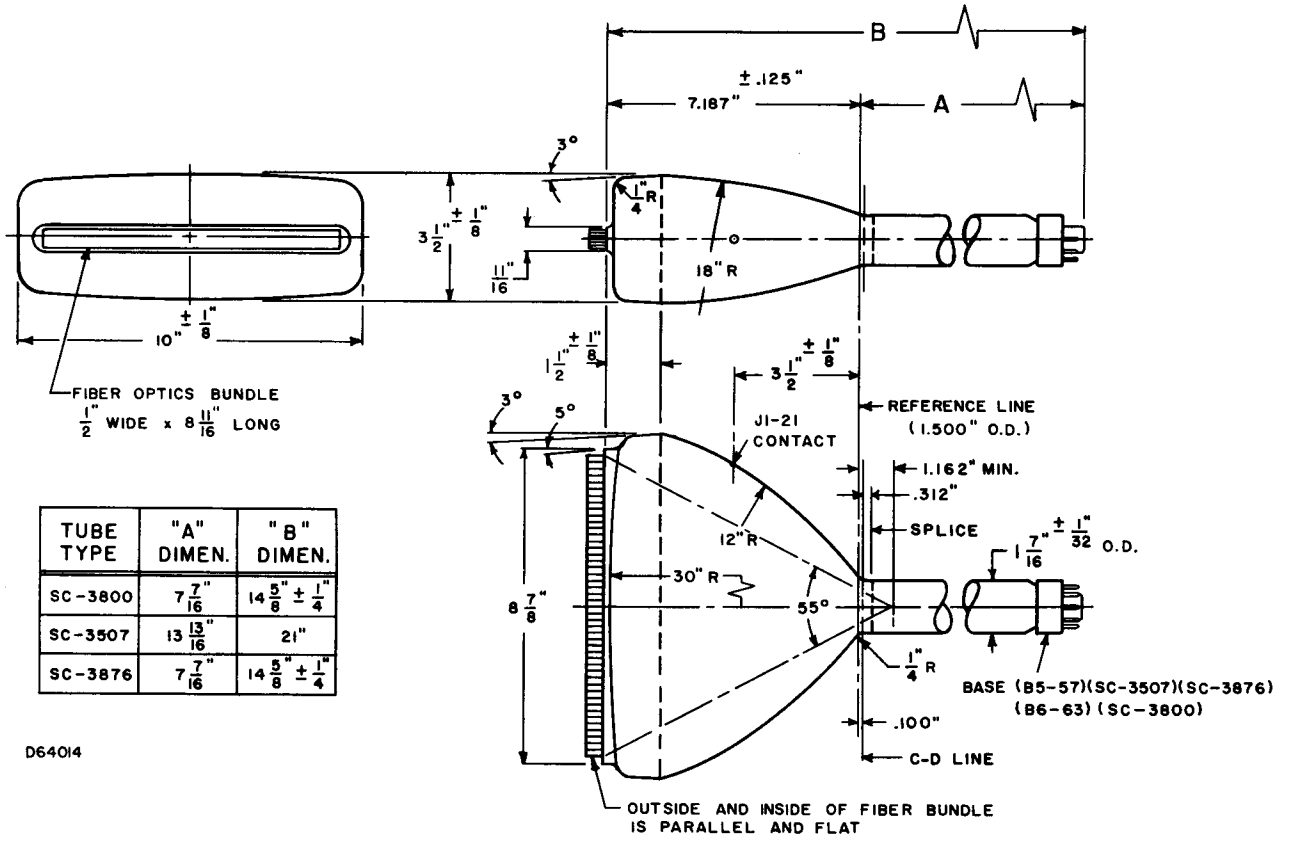
File Under
SPECIAL AND GENERAL PURPOSE CATHODE RAY TUBES

CIRCUIT VALUES	SC-3507	SC-3800	SC-3876
Grid No. 1 Circuit Resistance	1.5	1.5	1.5 Megohms Max.

NOTES:

1. *Visual extinction of undeflected focused spot.*
2. *For JEDEC focusing coil 106 or equivalent, 2½ inches from reference line.*
3. *Line width measured at 5 μa by the shrinking raster method. Variable strength (0-10 gauss) beam centering magnet must be used for optimum line width.*
4. *SC-3507 must be operated with A2 or screen grounded and cathode at −20 KV. SC-3800 and SC-3876 must be operated only with anode grounded and cathode at −10 KV.*

OUTLINE



TUBE TYPE	"A" DIMEN.	"B" DIMEN.
SC-3800	7 7/16"	14 5/8" ± 1/4"
SC-3507	13 13/16"	21"
SC-3876	7 7/16"	14 5/8" ± 1/4"

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