

CHARACTERISTICS

GENERAL DATA

Focusing Method	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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*In addition to the types shown, the 5BTP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	$0.6 \pm 10\%$ Amperes
Direct Interelectrode Capacitances (approx.)	
Cathode to All Other Electrodes	5.0 μmf
Grid No. 1 to All Other Electrodes	8.0 μmf
D1 to D2	2.0 μmf
D3 to D4	3.0 μmf
D1 to All Other Electrodes	10.5 μmf
D2 to All Other Electrodes	8.5 μmf
D3 to All Other Electrodes	8.5 μmf
D4 to All Other Electrodes	9.5 μmf

MECHANICAL DATA

Minimum Useful Screen Diameter	4 1/2 Inches
Bulb	LEA-407 or Equivalent
Bulb Contact (Recessed Small Ball Cap)	J1-22
Base (Small Shell Duodecal 12-Pin)	B12-43
Basing	See Diagram
Bulb Contact Alignment	
J1-22 Contact Aligns with D1-D2 Trace	± 10 Degrees
J1-22 Contact on Same Side as Pin No. 4	
Base Alignment	
D1-D2 Trace Aligns with Pin No. 4 and Tube Axis	0 ± 10 Degrees
Positive Voltage on D1 Deflects Beam approximately Toward Pin No. 4	
Positive Voltage on D3 Deflects Beam approximately Toward Pin No. 1	
Angle Between D3-D4 and D1-D2 Traces	90 ± 1 Degrees
Deflection Plates	
D1-D2 are Closer to Screen	
D3-D4 are Closer to Base	
Weight (approx.)	2 Pounds

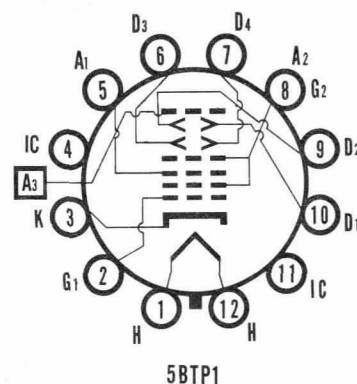
RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode No. 2 Input	6 Wats
Anode No. 3 Voltage	4400 Volts dc
Anode No. 2 Voltage	2700 Volts dc
Ratio Anode No. 3 to Anode No. 2 Voltage	2.1 Max.
Anode No. 1 (Focusing Electrode)	1100 Volts dc

QUICK REFERENCE DATA

Oscilloscope Tube
5" Direct Viewed
Round Glass Type
Flat, Clear Faceplate
Short Length
Electrostatic Deflection
Electrostatic Focus
Post Deflection Accelerator
High Deflection Sensitivity



SYLVANIA ELECTRONIC TUBES

A Division of
Sylvania Electric Products Inc.

PICTURE TUBE OPERATIONS
SENECA FALLS, NEW YORK

Prepared and Released By The
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APRIL, 1960

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File Under
SPECIAL PURPOSE
CATHODE RAY TUBES

PAGE 2 MAXIMUM RATINGS (Absolute Maximum Values) (cont'd)

Grid No. 1 Voltage	
Negative Bias Value	140 Volts dc
Positive Bias Value	0 Volts dc
Positive Peak Value	2 Volts
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	140 Volts
Heater Positive with Respect to Cathode	140 Volts
Peak Voltage Between Anode No. 2 and Any	
Deflection Plate	600 Volts

TYPICAL OPERATING CONDITIONS

Anode No. 3 Voltage	3000 Volts dc
Anode No. 2 Voltage	1500 Volts dc
Anode No. 1 Voltage for Focus	570 to 772 Volts dc
Grid No. 1 Voltage Required for Cutoff ¹	-40 to -94 Volts dc
Deflection Factors	
Deflection Plates D1-D2	81 to 109 Volts dc/Inch
Deflecting Plates D3-D4	43 to 58 Volts dc/Inch
Spot Position ²	Within a 15 mm Square
Useful Scan	
D1-D2	Full Screen Coverage
D3-D4	4 Inches — Centered with Respect to the tube face

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms
Deflection Circuit Resistance ³	1.5 Megohms

NOTES:

1. Visual extinction of the undeflected focused spot.
2. With the tube shielded and with all deflection plates connected to Anode No. 2. Limit square centered on tube face with the sides parallel to deflection axes.
3. It is recommended that the deflecting electrode circuit resistances be approximately equal.

OUTLINE

