

ELECTRONIC TUBE REFERENCE

27GP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Twenty-seven-inch direct-view monochrome television picture tube with magnetic deflection and high-voltage operation. Manufacturer documentation provides focusing, optical, and electrical characteristics for large-screen receiver display service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	22500 V
MAXIMUM SCREEN VOLTAGE	500 V
Direct-view television CRT; high-voltage electrode rating mapped to MaxPlateVoltage as the section high-voltage limit.	

Direct-view cathode-ray picture tube intended for television display service. The supplied Tung-Sol datasheet provides electrical ratings, operating conditions, capacitances, optical characteristics, focusing and deflection information.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 SYLVANIA

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current (approx) 06 Ampere	6 A	Heater Current (approx) 06 Ampere
Anode Voltage. 22500 Volts dc	22500 V	Anode Voltage. 22500 Volts dc
Grid No. 1 Voltage . o	1 V	Grid No. 1 Voltage . o
Anode Voltage! 20,000 Volts dc	20 V	Anode Voltage! 20,000 Volts dc
Grid No. 2 Voltage 300 Vol dc	2 V	Grid No. 2 Voltage 300 Vol dc
Grid No. 1 Voltage? Required for Cutoff =281t0-72 Volts dc	-72 V	Grid No. 1 Voltage? Required for Cutoff =281t0-72 Volts dc
Focusing Coil Current® 125 #= 209 Ma dc	209 Ma	Focusing Coil Current® 125 #= 209 Ma dc
Anode Voltage or 16,000 volts, whichever is less.	16 V	Anode Voltage or 16,000 volts, whichever is less.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1961 TUNG SOL

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Cathode Capacitance	5 pF	Approximate

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HighVoltageElectrodeMaximum	22500 V	CRT



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1966 Tung Sol Electronic Tubes 4 of 4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HABNETIC FOCUS b DEFLEC110M	10	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
RECTANGULAR GLASS CONSTRUCTION – value 1	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
RECTANGULAR GLASS CONSTRUCTION – value 2	10	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
GRID #1 TO ALL OTHER ELECTRODES – value 1	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
GRID #1 TO ALL OTHER ELECTRODES – value 2	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID #1 TO ALL OTHER ELECTRODES – value 3	6	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
PHOSPHOR NUMBER	4	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) – value 1	11 percent	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) – value 2	66 percent	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER CURRENT	600 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER POSITIVE WITH RESPECT TO CATHODE – value 1	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER POSITIVE WITH RESPECT TO CATHODE – value 2	0 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC ANODE SGRID #3 VOL TAGE B – value 1	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC ANODE SGRID #3 VOL TAGE B – value 2	16000 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #2 VOLTAGE – value 1	2 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #2 VOLTAGE – value 2	300 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #i VOLTAGE C – value 1	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #i VOLTAGE C – value 2	33 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC GRID #i VOLTAGE C – value 3	77 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC FOCUSING COIL CURRENT (APPROX.)D – value 1	95 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC FOCUSING COIL CURRENT (APPROX.)D – value 2	20 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC ION TRAP CURRENT STANDARD COIL #iii (APPROX.J – value 1	10 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC ION TRAP CURRENT STANDARD COIL #iii (APPROX.J – value 2	111 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC ION TRAP CURRENT STANDARD COIL #iii (APPROX.J – value 3	100 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
BIF TXIS TUBE IS OPERATED AT VOLTAGES IN E%CESS OF 16.000 VOLTS, X-RAY RADI ATIOM SX IEL DING MAY – value 1	0 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
BIF TXIS TUBE IS OPERATED AT VOLTAGES IN E%CESS OF 16.000 VOLTS, X-RAY RADI ATIOM SX IEL DING MAY – value 2	16 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
BIF TXIS TUBE IS OPERATED AT VOLTAGES IN E%CESS OF 16.000 VOLTS, X-RAY RADI ATIOM SX IEL DING MAY – value 3	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
CVISV AL EXTINCTION OF UNOEFI ECT ED FOCUSED SPOT.	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DFOR STANDARD FOCUS COIL /109, OR EQUIVALENT. WI TX TXE COMBINED GRID /1 BIAS VOLTAGE AMD VIDEO – value 1	109 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DFOR STANDARD FOCUS COIL /109, OR EQUIVALENT. WI TX TXE COMBINED GRID /1 BIAS VOLTAGE AMD VIDEO – value 2	0 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DFOR STANDARD FOCUS COIL /109, OR EQUIVALENT. WI TX TXE COMBINED GRID /1 BIAS VOLTAGE AMD VIDEO – value 3	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
SI GX AL VOLTAGE AD JU STEO TO PRODUCE A NIGHLIGHT BRI GX TXE SS OF 20 FOOT CAMBER TS OM A 24 1/4 " BY – value 1	0 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
SI GX AL VOLTAGE AD JU STEO TO PRODUCE A NIGHLIGHT BRI GX TXE SS OF 20 FOOT CAMBER TS OM A 24 1/4 " BY – value 2	241 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
SI GX AL VOLTAGE AD JU STEO TO PRODUCE A NIGHLIGHT BRI GX TXE SS OF 20 FOOT CAMBER TS OM A 24 1/4 " BY – value 3	4 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM DC ANODE S GRID #3 VOLTAGE – value 1	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC ANODE S GRID #3 VOLTAGE – value 2	22500 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #2 VOLTAGE – value 1	2 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #2 VOLTAGE – value 2	500 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM GRID #i VOLTAGE	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM GR iD #1 CIRCUIT RESISTANCE – value 1	1 Mohm	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM GR iD #1 CIRCUIT RESISTANCE – value 2	1 Mohm	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM GR iD #1 CIRCUIT RESISTANCE – value 3	15 Mohm	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.



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