

ELECTRONIC TUBE REFERENCE

21ALP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Twenty-one-inch direct-view monochrome television picture tube designed for large-screen receiver service. Manufacturer data documents its magnetic scanning system, high-voltage operation, and picture-tube optical and electrical characteristics.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12L	BASE PINS	6
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	18000 V
MAXIMUM SCREEN VOLTAGE	500 V
CRT ratings, operating conditions, capacitances, optical and deflection data retained as parameters.	

Direct-view cathode-ray picture tube for television display service. Electrical ratings, operating conditions, capacitances, optical data, and construction details were extracted from the supplied datasheet.



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

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Typical grid 2 voltage	200 V	Typical operating conditions

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diagonal deflection angle	90 deg	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode to all other electrodes	4 pF	Approximate



SOURCE OPERATING CONDITIONS

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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

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FACEPLATE LIGHT TRANSMISSION	5 percent	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE	3 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
HEATER POSITIVE WITH RESPECT 70 CATHODE	70 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VOLTAGE D – value 1	4 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VOLTAGE D – value 2	55 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VOLTAGE D – value 3	3 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #2 VOLTAGE – value 1	2 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #2 VOLTAGE – value 2	3 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #1 VOLTAGE E – value 1	1 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #1 VOLTAGE E – value 2	-2 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #1 VOLTAGE E – value 3	-72 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
D WITX ANODE CURRENT OF 100 μAMP•	100	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
I N.AGYUCH AS THE TUBE RATING PERMITS OPERATION AT VOLTAGES AS HIGH AS 19•R NI LOVOLTAGE (A850L UTE	19 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
PLAT[	16 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM DC GRID #2 VOLTAGE	2 V	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1 mA	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Anode Voltage	16000 V	—
Typical Grid No. 2 Voltage	300 V	—
Grid No. 1 Maximum Negative Bias	125 V	—
Grid No. 1 Maximum Positive Peak	2 V	—