

**TUNG-SOL****CATHODE RAY**

THE 21CUP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

UNIPOTENTIAL CATHODE	ALUMINIZED SCREEN
GRAY FILTER FACEPLATE	EXTERNAL CONDUCTIVE COATING
MAGNETIC FOCUS AND DEFLECTION	EXTERNAL SINGLE FIELD ION TRAP
19 1/16" X 15 1/16" RASTER SIZE	

**ELECTRICAL DATA**

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	85	DEGREES
DIAGONAL	90	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	$\mu\mu\text{f}$
GRID #1 TO ALL OTHER ELECTRODES	6	$\mu\mu\text{f}$
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	2500	$\mu\mu\text{f}$
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	2000	$\mu\mu\text{f}$

**OPTICAL DATA**

PHOSPHOR NUMBER	SULFIDE TYPE.	P-4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE TRANSMISSION AT CENTER (APPROX.):	74	PERCENT

**RATINGS**

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT		AMP.
MAXIMUM DC ANODE VOLTAGE	0.6 $\pm 10\%$	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	22 000	VOLTS
MAXIMUM DC GRID #1 VOLTAGE:	550	VOLTS
DC NEGATIVE-BIAS VALUE	155	VOLTS
DC POSITIVE-BIAS VALUE	0	VOLTS
POSITIVE-PEAK VALUE	2	VOLTS
MAXIMUM DC 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	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	200	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEG OHMS

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

DC ANODE VOLTAGE	16 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE <sup>A</sup>	-28 TO -72	VOLTS
DC FOCUSING COIL CURRENT (APPROX.)	117	MA.
DC ION TRAP MAGNET RATED STRENGTH	40	GAUSSSES

<sup>A</sup> VISUAL EXTINCTION OF FOCUSED RASTER.

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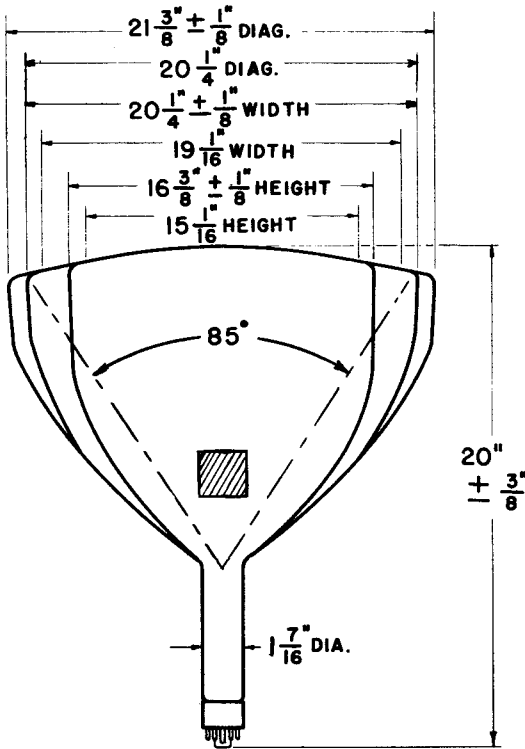
**TUNG-SOL**

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**MECHANICAL DATA**

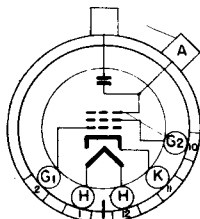
OVERALL LENGTH	20 ± 3/8	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	21 3/8 ± 1/8	INCHES
WIDTH	20 1/4 ± 1/8	INCHES
HEIGHT	16 3/8 ± 1/8	INCHES
MIN. USEFUL SCREEN DIMENSIONS:		
DIAGONAL	20 1/4	INCHES
WIDTH	19 1/16	INCHES
HEIGHT	15 1/16	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J4-24
BASE	SMALL SHELL DUODECAL 5 PIN	B5-57
BASING		12N
BULB CONTACT ALIGNMENT		

J4-24 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES



**PIN CONNECTIONS**

- PIN 1 - HEATER
- PIN 2 - GRID #1
- PIN 10 - GRID #2
- PIN 11 - CATHODE



- PIN 12 - HEATER
- ANODE CAP:
- GRID NO. 3

BOTTOM VIEW