TUNG-SOL

CATHODE RAY

THE 17VP4 AND 17VP4B ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL *EXCEPT* FOR THE ALUMINIZED SCREEN ON THE 17VP4B. THEIR COMMON FEATURES INCLUDE:

MAGNETIC DEFLECTION — **UNIPOTENTIAL CATHODE**
EXTERNAL CONDUCTIVE COATING — **CYLINDRICAL FACEPLATE**
RECTANGULAR GLASS CONSTRUCTION — **NEUTRAL DENSITY FACEPLATE**
LOW VOLTAGE ELECTROSTATIC FOCUS — **EXTERNAL SINGLE FIELD ION TRAP**
10 7/8" X 14 1/2" RASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD		ELECTROSTATIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)		
HORIZONTAL	66	DEGREES
DIAGONAL	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)		
CATHODE TO ALL OTHER ELECTRODES	5	μμf
GRID #1 TO ALL OTHER ELECTRODES	6	μμf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	1 500	μμf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	μμf

OPTICAL DATA

PHOSPHOR NUMBER	SULFIDE TYPE	NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		SHORT
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	58 - 72	PERCENT

RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE #2, GRID #3 VOLTAGE (WITH PROTECTIVE FACE VIEWING WINDOW)[A]	16 000	VOLTS
MAXIMUM ANODE #1 VOLTAGE RANGE FOR FOCUS[B]	-64 TO +350	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	500	VOLTS
MAXIMUM GRID #1 VOLTAGE		
DC NEGATIVE-BIAS VALUE	125	VOLTS
DC POSITIVE-BIAS VALUE	0	VOLTS
POSITIVE-PEAK VALUE	2	VOLTS
MAXIMUM DC ANODE #1 VOLTAGE	-500 TO +1000	VOLTS
MAXIMUM DC ANODE #1 CURRENT RANGE	-15 TO +25	μAMP.
MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE		
HEATER NEGATIVE WITH RESPECT TO CATHODE		
DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS	410	VOLTS
AFTER EQUIPMENT WARM-UP PERIOD	180	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	180	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS

[B] WITH THE COMBINED GRID #1 VOLTAGE AND VIDEO-DRIVE VOLTAGE ADJUSTED, USING AN INDIAN HEAD TEST PATTERN WITH THE BLACKS JUST BLACK, TO GIVE AN AVERAGE BEAM CURRENT OF 100 MICROAMPERES ON A 10 3/4" BY 14 1/4" PICTURE AREA.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE #2,, GRID #3 VOLTAGE	12 000	VOLTS
DC ANODE #1 VOLTAGE (FOCUSING ELECTRODE)	-48 TO +260	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE[C]	-33 TO -77	VOLTS
DC ION TRAP CURRENT STANDARD COIL #111	75 ± 50%	MA.
ION TRAP FIELD INTENSITY (APPROX.)[D]	35	GAUSSES

[C] VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

[D] SINGLE FIELD ION-TRAP ADJUSTED TO OPTIMUM POSITION.

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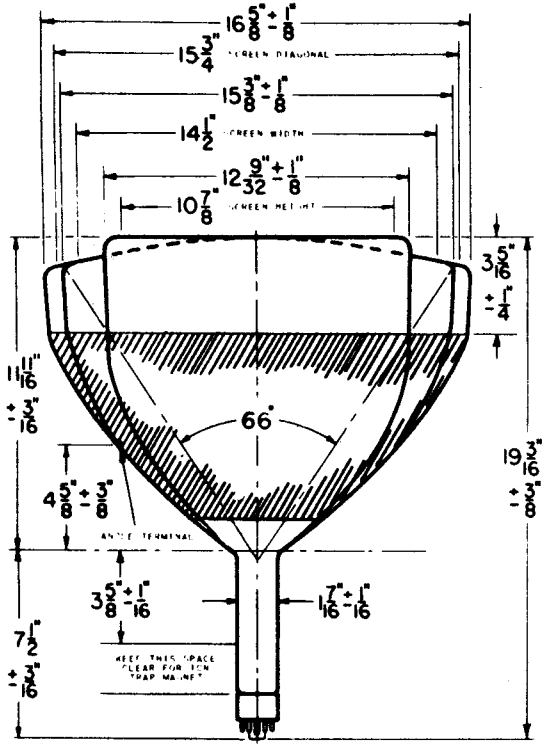
MECHANICAL DATA

OVERALL LENGTH	19 3/16 ± 3/8	INCHES
GREATEST DIMENSIONS OF BULB		
DIAGONAL	16 5/8 ± 1/8	INCHES
WIDTH	15 3/8 ± 1/8	INCHES
HEIGHT	12 9/32 ± 1/8	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS		
DIAGONAL	15 3/4	INCHES
WIDTH	14 1/2	INCHES
HEIGHT	10 7/8	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 6 PIN	B6-63
BASING		12L

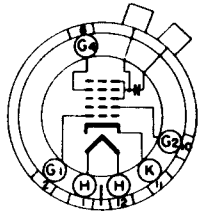
BULB CONTACT ALIGNMENT

J1-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES



PIN CONNECTIONS

PIN 1 – HEATER
PIN 2 – GRID NO. 1
PIN 6 – GRID NO. 4
PIN 10 – GRID NO. 2



BOTTOM VIEW

PIN 11 – CATHODE
PIN 12 – HEATER
ANODE CAP:
GRID NO. 3