

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

THE 17QP4 AND 17QP4A ARE DIRECT VIEW PICTURE TUBES INTENDED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL *EXCEPT* FOR THE ALUMINIZED SCREEN ON THE 17QP4A.

GREY FILTER FACEPLATE	UNIPOENTIAL CATHODE
EXTERNAL CONDUCTIVE COATING	CYLINDRICAL FACEPLATE
MAGNETIC FOCUS AND DEFLECTION	10 3/4" X 14 1/4" RASTER SIZE
RECTANGULAR GLASS CONSTRUCTION	EXTERNAL SINGLE FIELD ION TRAP

**ELECTRICAL DATA**

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)		
HORIZONTAL	65	DEGREES
VERTICAL	50	DEGREES
DIAGONAL	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)		
CATHODE TO ALL OTHER ELECTRODES	5	μf
GRID #1 TO ALL OTHER ELECTRODES	6.5	μf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	1 500	μf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	μf

**OPTICAL DATA**

PHOSPHOR	SULFIDE TYPE	NO. 4.
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	66	PERCENT

**RATINGS**  
DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE, GRID #3 VOLTAGE	18 000 ←	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 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	150	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	150	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHM <sup>2</sup>

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

DC ANODE, GRID #3 VOLTAGE	14 000 ←	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE <sup>A</sup>	-28 TO -72 ←	VOLTS
DC FOCUSING COIL CURRENT (APPROX.) <sup>B</sup>	95 ←	MA.
ION TRAP FIELD INTENSITY STANDARD COIL #111 (APPROX.)	30 ←	GAUSSSES

<sup>A</sup>VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

<sup>B</sup>FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 30 FOOT LAMBERTS ON A 14 3/8" BY 10 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.0 INCHES.

→ INDICATES A CHANGE.

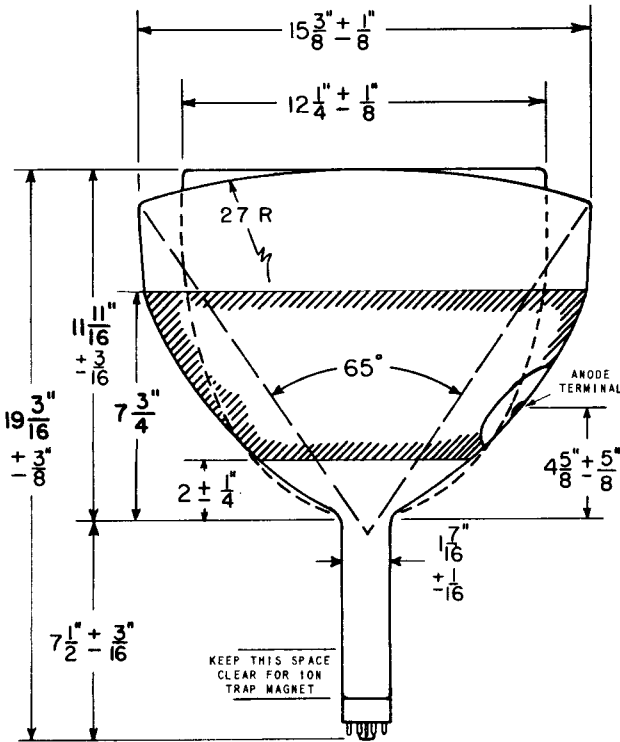
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**TUNG-SOL**

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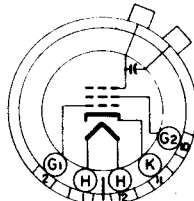
**MECHANICAL DATA**

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 1/4 ± 1/8	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS		
DIAGONAL	15 5/16	INCHES
WIDTH	14 1/4	INCHES
HEIGHT	10 3/4	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 5 PIN	B5-57
BASING		12N
BULB CONTACT ALIGNMENT		
J1-21 CONTACT ALIGNS WITH VACANT PIN POSITION #6 ± 30 DEGREES		



**PIN CONNECTIONS**

- PIN 1 - HEATER
- PIN 2 - GRID NO. 1
- PIN 10 - GRID NO. 2
- PIN 11 - CATHODE



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

BOTTOM VIEW