

TUNG-SOL

CATHODE RAY

THE 21WP4 AND 21WP4A ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE ALUMINIZED SCREEN ON THE 21WP4A. THEIR COMMON FEATURES INCLUDE:

UNIPOENTIAL CATHODE	SPHERICAL FACEPLATE
GREY FILTER FACEPLATE	12 3/4" X 17" RASTER SIZE
MAGNETIC FOCUS & DEFLECTION	EXTERNAL CONDUCTIVE COATING
RECTANGULAR GLASS CONSTRUCTION	EXTERNAL SINGLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	66	DEGREES
VERTICAL	50	DEGREES
DIAGONAL	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	$\mu\mu f$
GRID #1 TO ALL OTHER ELECTRODES	6	$\mu\mu f$
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	$\mu\mu f$
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	500	$\mu\mu f$

OPTICAL DATA

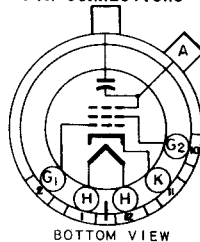
PHOSPHOR NUMBER		P4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	72	PERCENT

MECHANICAL DATA

OVERALL LENGTH	22 7/16 ± 3/8	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	20 5/8 ± 3/16	INCHES
WIDTH	18 11/16 ± 1/8	INCHES
HEIGHT	14 15/16 ± 1/8	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
WIDTH	17	INCHES
HEIGHT	12 3/4	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J4-24
BASE	SMALL SHELL DUODECAL 5 PIN	B5-57
BASING		12N
BULB CONTACT ALIGNMENT		
J1-24 CONTACT ALIGNS WITH 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

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RATINGS

DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE 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	180	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	180	VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE	16 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^A	-28 TO -72	VOLTS
DC FOCUSING COIL CURRENT (APPROX.) ^B	100 ± 20%	MA.
ION TRAP CURRENT STANDARD COIL #117 (APPROX.)	30 ± 40%	MA.
ION TRAP MAGNET FIELD STRENGTH (APPROX.)	35	GAUSSSES

^A VISUAL EXTINCTION OF FOCUSED RASTER.^B 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 12 3/4" BY 17" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.25 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
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