

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

THE 24TP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

<b>SPHERICAL FACEPLATE</b>	<b>UNIPOTENTIAL CATHODE</b>
<b>ALUMINIZED FACEPLATE</b>	<b>GREY FILTER FACEPLATE</b>
<b>MAGNETIC FOCUS &amp; DEFLECTION</b>	<b>EXTERNAL CONDUCTIVE COATING</b>
<b>RECTANGULAR GLASS CONSTRUCTION</b>	<b>EXTERNAL SINGLE FIELD ION TRAP</b>

**ELECTRICAL DATA**

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTING ANGLE (APPROX.) DIAGONAL	90	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	$\mu\text{f}$
GRID #1 TO ALL OTHER ELECTRODES	6	$\mu\text{f}$
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	$\mu\text{f}$
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	250	$\mu\text{f}$

**OPTICAL DATA**

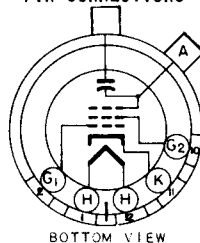
PHOSPHOR NUMBER		NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	72	PERCENT

**MECHANICAL DATA**

OVERALL LENGTH	$21 \frac{1}{8} \pm \frac{3}{8}$	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	24	INCHES
WIDTH	$22 \frac{11}{16}$	INCHES
HEIGHT	$18 \frac{7}{16}$	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
WIDTH	$21 \frac{7}{16}$	INCHES
HEIGHT	$17 \frac{1}{8}$	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 5 PIN	B5-57
BASING		12N

**PIN CONNECTIONS**

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



PIN 11 - CATHODE  
 PIN 12 - HEATER  
 ANODE CAP

BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## RATINGS

DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE VOLTAGE	20 000	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	14 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE <sup>A</sup>	-33 TO -77	VOLTS
DC FOCUSING COIL CURRENT <sup>B</sup> (APPROX.)	110 ± 10	MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)	85 ± 50%	MA.

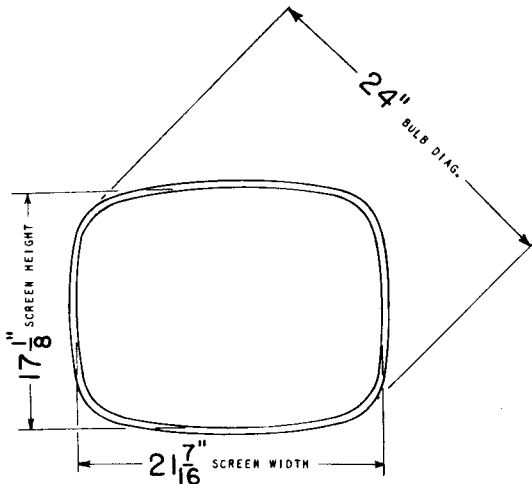
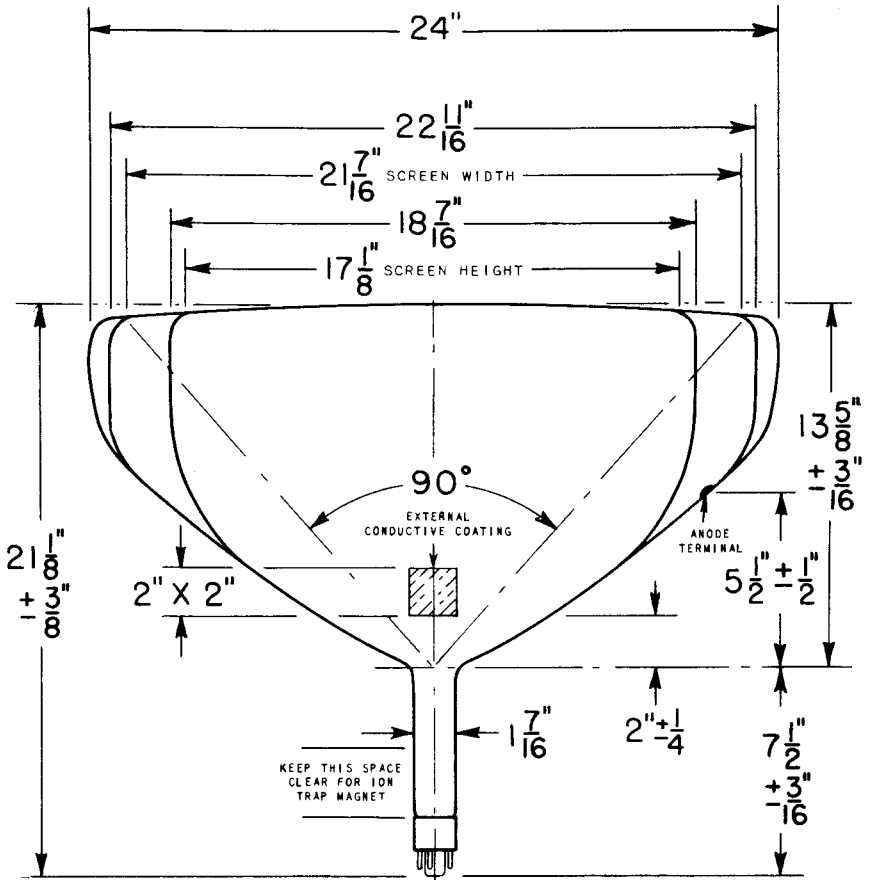
<sup>A</sup> VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

<sup>B</sup> FOR STANDARD FOCUS COIL #109.

## CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
------------------------------------	-----	---------

TUNG-SOL



PRINTED IN U. S. A.