

TUNG-SOL

CATHODE RAY

THE 20JP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

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

ELECTRICAL DATA

		ELECTROSTATIC
		MAGNETIC
FOCUSING METHOD		
DEFLECTING METHOD		
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	65	DEGREES
DIAGONAL	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	6.0	$\mu\mu\text{f}$
GRID #1 TO ALL OTHER ELECTRODES	6.5	$\mu\mu\text{f}$
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	$\mu\mu\text{f}$
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	500	$\mu\mu\text{f}$

OPTICAL DATA

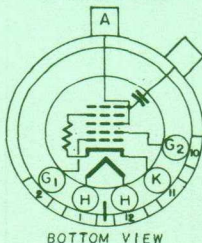
PHOSPHOR NUMBER	NO. 4
FLUORESCENT COLOR	WHITE
PHOSPHORESCENT COLOR	WHITE
PERSISTENCE	MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	66 PERCENT

MECHANICAL DATA

OVERALL LENGTH	21 3/4 $\pm$ 3/8	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	20 3/32 $\pm$ 1/8	INCHES
WIDTH	18 11/16 $\pm$ 1/8	INCHES
HEIGHT	14 15/16 $\pm$ 1/8	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
WIDTH	17	INCHES
HEIGHT	12 3/4	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 5 PIN	B5-57
BASING		12P
BULB CONTACT ALIGNMENT		
J1-21 CONTACT ALIGNS WITH PIN POSITION #6 $\pm$ 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	12 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^A	-33 TO -77	VOLTS
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)	50 ± 50%	MA.

^A VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
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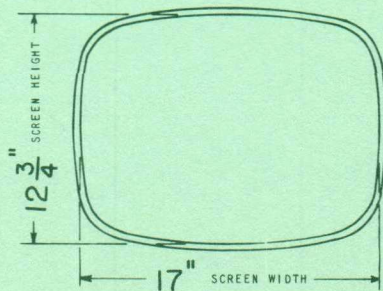
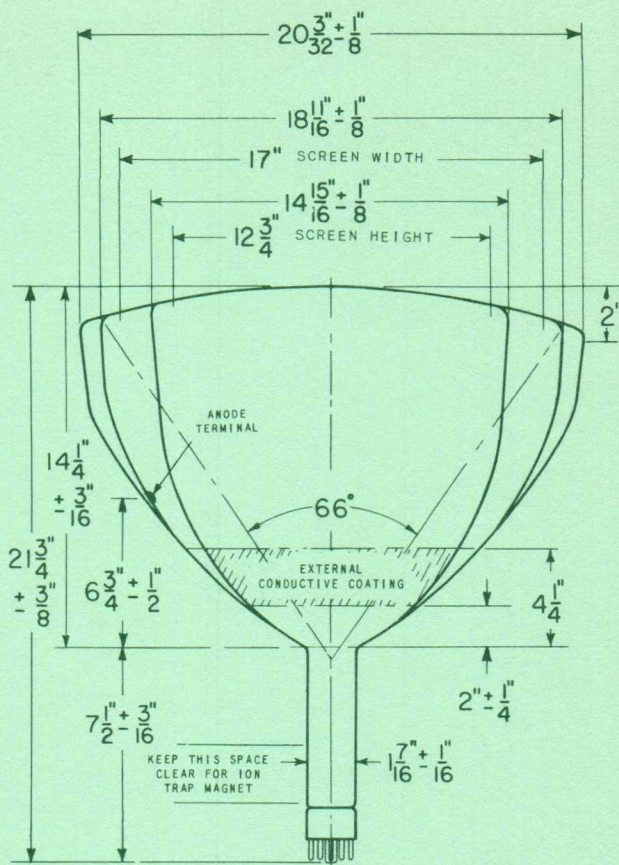


Figure 1. The effect of the concentration of the solution on the rate of the reaction.

Figure 2. The effect of the concentration of the solution on the rate of the reaction.

Figure 3. The effect of the concentration of the solution on the rate of the reaction.

Figure 4. The effect of the concentration of the solution on the rate of the reaction.

Figure 5. The effect of the concentration of the solution on the rate of the reaction.

Figure 6. The effect of the concentration of the solution on the rate of the reaction.

Figure 7. The effect of the concentration of the solution on the rate of the reaction.

Figure 8. The effect of the concentration of the solution on the rate of the reaction.

Figure 9. The effect of the concentration of the solution on the rate of the reaction.

Figure 10. The effect of the concentration of the solution on the rate of the reaction.

Figure 11. The effect of the concentration of the solution on the rate of the reaction.

Figure 12. The effect of the concentration of the solution on the rate of the reaction.

Figure 13. The effect of the concentration of the solution on the rate of the reaction.

Figure 14. The effect of the concentration of the solution on the rate of the reaction.