

TUNG-SOL

CATHODE RAY

THE 19DP4 AND 19DP4A ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE FOLLOWING DIFFERENCE IN THEIR FACEPLATES:

19DP4 - CLEAR GLASS FACEPLATE

19DP4A - GREY FILTER FACEPLATE

THEIR COMMON FEATURES INCLUDE:

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| UNIPOTENTIAL CATHODE | ROUND GLASS CONSTRUCTION |
| MAGNETIC FOCUS & DEFLECTION | EXTERNAL CONDUCTIVE COATING |
| 11 3/4" X 15 3/4" RASTER SIZE | EXTERNAL SINGLE FIELD ION TRAP |

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)	66	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)		
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	2500	$\mu\mu\text{f}$
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	$\mu\mu\text{f}$

OPTICAL DATA

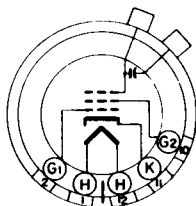
PHOSPHOR NUMBER	19DP4A	NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	70	PERCENT

MECHANICAL DATA

OVERALL LENGTH	21 1/2 ± 3/8	INCHES
GREATEST DIAMETER OF BULB	18 7/8 ± 1/8	INCHES
MINIMUM USEFUL SCREEN DIAMETER	17 3/8	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 PIN POSITION #3 ± 10 DEGREES		

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

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RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE VOLTAGE	17 000	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	410	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	125	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	125	VOLTS

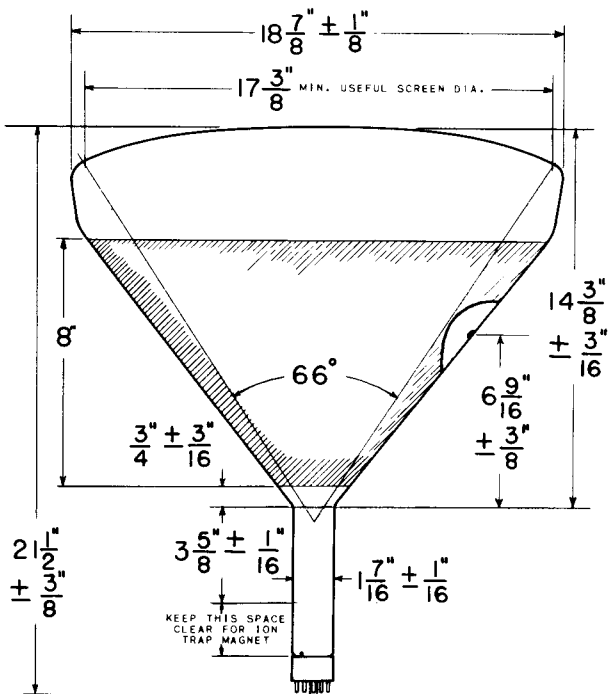
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE	13 000	VOLTS
DC GRID #2 VOLTAGE	250	VOLTS
DC GRID #1 VOLTAGE ^A	-26 TO -63	VOLTS
DC FOCUSING COIL CURRENT (APPROX.) ^B	146	MA.
DC ION TRAP CURRENT STANDARD COIL (APPROX.)	75 ± 50%	MA.

^AVISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.^BFOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 25 FOOT LAMBERTS ON A 11 3/4" BY 15 3/4" 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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