

TUNG-SOL

CATHODE RAY

THE 19GP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

GREY FILTER FACEPLATE	UNIPOTENTIAL CATHODE
ROUND GLASS CONSTRUCTION	11 3/4" X 15 3/4" RASTER SIZE
MAGNETIC FOCUS AND DEFLECTION	EXTERNAL SINGLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)	66	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)		
CATHODE TO ALL OTHER ELECTRODES	5	μlf
GRID #1 TO ALL OTHER ELECTRODES	6	μlf

OPTICAL DATA

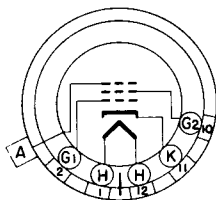
PHOSPHOR NUMBER		NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	66	PERCENT

MECHANICAL DATA

OVERALL LENGTH	21 1/4 \pm 1/2	INCHES
GREATEST DIAMETER OF BULB	18 7/8 \pm 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	85-57
BASING		12D
BULB CONTACT ALIGNMENT		
J1-21 CONTACT ALIGNS WITH PIN POSITION #3 \pm 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	19 000	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	-27 to -63	VOLTS
DC FOCUSING COIL CURRENT ^B (APPROX.)	130	MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)	105	MA.

^A VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

^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 20 FOOT LAMBERTS ON A 11 3/4" X 15 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.0 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEG OHMS
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