

TUNG-SOL

CATHODE RAY

THE 16GP4, 16GP4A, 16GP4B, AND 16GP4C ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THEIR FACEPLATES WHICH ARE AS FOLLOWS:

16GP4 - GREY FILTER FACEPLATE

16GP4B - GREY FILTER - FROSTED

16GP4A - CLEAR GLASS FACEPLATE

16GP4C - CLEAR GLASS - FROSTED

THEIR COMMON FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
MAGNETIC FOCUS & DEFLECTION

ROUND METAL CONSTRUCTION
EXTERNAL SINGLE FIELD ION TRAP
10" X 13 1/4" RASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.)	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	μuf
GRID #1 TO ALL OTHER ELECTRODES	6	μuf

OPTICAL DATA

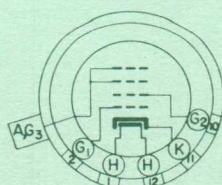
PHOSPHOR NUMBER		NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	65	PERCENT
SPECULAR REFLECTION OF AMBIENT LIGHT	16GP4B 2.5	PERCENT

MECHANICAL DATA

OVERALL LENGTH	17 11/16	INCHES
GREATEST DIAMETER OF BULB	15 7/8 $\pm$ 1/8	INCHES
MINIMUM USEFUL SCREEN DIAMETER	14 3/8	INCHES
BULB CONTACT	METAL SHELL LIP	
BASE	SMALL SHELL DUODECAL 5 PIN	85-57
BASING		120

PIN CONNECTIONS

PIN 1 - HEATER
PIN 2 - GRID NO. 1
PIN 10 - GRID NO. 2
PIN 11 - CATHODE



PIN 12 - HEATER
METAL SHELL LIP:
ANODE
GRID NO. 3

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, GRID 3 VOLTAGE ^A	14 000	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	150	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	150	VOLTS

^A THE PRODUCT OF ANODE VOLTAGE AND AVERAGE ANODE CURRENT SHOULD BE LIMITED TO 6 WATTS.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE ^B	12 000	VOLTS	
DC GRID #2 VOLTAGE	300	VOLTS	
DC GRID #1 VOLTAGE ^C	-33 TO -77	VOLTS	
DC FOCUSING COIL CURRENT (APPROX.) ^D	100	MA.	
ION TRAP MAGNET (RATED STRENGTH)	23	GAUSSES	
	16GP4A AND 16GP4B ONLY	35	GAUSSES

^B BRILLIANCE AND DEFINITION DECREASE WITH DECREASING ANODE VOLTAGE. IN GENERAL, THE ANODE VOLTAGE SHOULD NOT BE LESS THAN 12,000 VOLTS.

^C VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

^D FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGH LIGHT BRIGHTNESS OF 30 FOOT LAMBERTS ON A 10" BY 13 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
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