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
- 16GP4A - CLEAR GLASS FACEPLATE
- 16GP4B - GREY FILTER - FROSTED
- 16GP4C - CLEAR GLASS - FROSTED

THEIR COMMON FEATURES INCLUDE:

- UNIPOTENTIAL CATHODE
- MAGNETIC FOCUS & DEFLECTION
- ROUND METAL CONSTRUCTION
- EXTERNAL SINGLE FIELD ION TRAP
- 10" X 15 1/8" RASTER SIZE

ELECTRICAL DATA

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

OPTICAL DATA

PHOSPHOR NUMBER NO. 4
FLUORESCENT COLOR WHITE
PHOSPHORESCENT COLOR WHITE
PERSISTENCE MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) 66 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 ± 1/8 INCHES
MINIMUM USEFUL SCREEN DIAMETER 14 3/8 INCHES
BULB CONTACT METAL SHELL LIP
BASE SMALL SHELL DUODECAL 5 PIN
BASING B5-57 120

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

CONTINUED ON FOLLOWING PAGE
RATINGS

DESERN CENTER VALUES

HEATER VOLTAGE
6.3 VOLTS

HEATER CURRENT
0.6 AMP.

MAXIMUM DC ANODE, GRID 3 VOLTAGE
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
12,000 VOLTS

DC GRID #2 VOLTAGE
300 VOLTS

DC GRID #1 VOLTAGE
-33 TO -77 VOLTS

DC FOCUSING COIL CURRENT (APPROX.)
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 UNDEFELECTED FOCUSED SPOT.

*D. FOR STANDARD FOCUS COIL #309, OR EQUIVALENT, WITH THE COMBINED GRID #3 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 30 FOOT LAMBERTS ON A 10" BY 13 1/4" 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