

September 15, 1965

QUICK REFERENCE DATA

114° MAGNETIC DEFLECTION
12" x 15.125" MIN. SCREEN SIZE
4.125" NECK LENGTH
SPHERICAL GRAY FILTER GLASS

BANDED IMPLSION PROTECTION

6.3 VOLT, 600 MA HEATER
ALUMINIZED SCREEN
NO ION TRAP
ELECTROSTATIC FOCUS

DETAILED DATA

ELECTRICAL

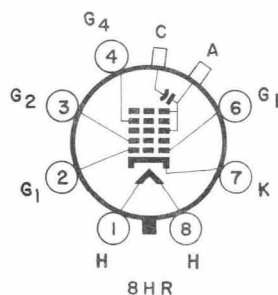
Focusing Method Low Voltage Electrostatic
Deflection Method Magnetic
Deflection Angles (Approx.):
Diagonal 114 Degrees
Horizontal 102 Degrees
Vertical 86 Degrees
Direct Interelectrode Capacitances:
Cathode to All Other Electrodes (Approx.) 5 pF
Grid No. 1 to All Other Electrodes (Approx.) 6 pF
External Conductive Coating to Anode:
Minimum 1750 pF
Maximum 1250 pF
Resistance Between External Conductive Coating and
Implsion Protection Hardware (minimum) 5 Megohms
Heater Current at 6.3 Volts 600 ± 5% mA
Heater Warm-up Time (Note 1) 11 Seconds

OPTICAL

Phosphor Number Aluminized P4
Light Transmittance at Center (Approx.) 49%

MECHANICAL

Over-all Length 11.375" ± 0.250"
Neck Length 4.125" ± 0.125"
Greatest Dimensions of Tube:
Diagonal 18.733" ± 0.100"
Width 16.552" ± 0.100"
Height 13.446" ± 0.100"
Minimum Useful Screen Dimensions (Projected):
Diagonal 17.563"
Horizontal Axis 15.125"
Vertical Axis 12"
Area 172 Sq. Inches
Implsion Protection Tension Band
Bulb Contact EIA J1-21
Bulb EIA J149F1
Base EIA B7-208
Basing EIA 8HR
Net Weight 15 Pounds



RATINGS

Design Maximum System

Unless Otherwise Specified, Voltage Values are Positive and Measured with Respect to Grid 1.

Maximum Anode Voltage (Note 2) 23000 Volts
Minimum Anode Voltage 11000 Volts
Maximum Grid 4 (Focusing Electrode) Voltage +1100, -550 Volts
Maximum Grid 2 Voltage 550 Volts
Minimum Grid 2 Voltage 200 Volts

Voltage:

Maximum Negative Bias Value 0 Volts
Maximum Negative Peak Value 2 Volts
Maximum Positive Bias Value 154 Volts
Maximum Positive Peak Value 220 Volts

Maximum Heater-Cathode Voltage:

Heater Negative with Respect to Cathode:

During Warm-up Period not to Exceed 15 Seconds . . 450 Volts
After Equipment Warm-up Period 300 Volts
Heater Positive with Respect to Cathode 200 Volts

LIMITING CIRCUIT VALUES

Maximum Grid 1 Circuit Resistance 1.5 Megohms
Minimum Grids 2 & 4 Circuit Resistance (Note 3) . . 10000 Ohms

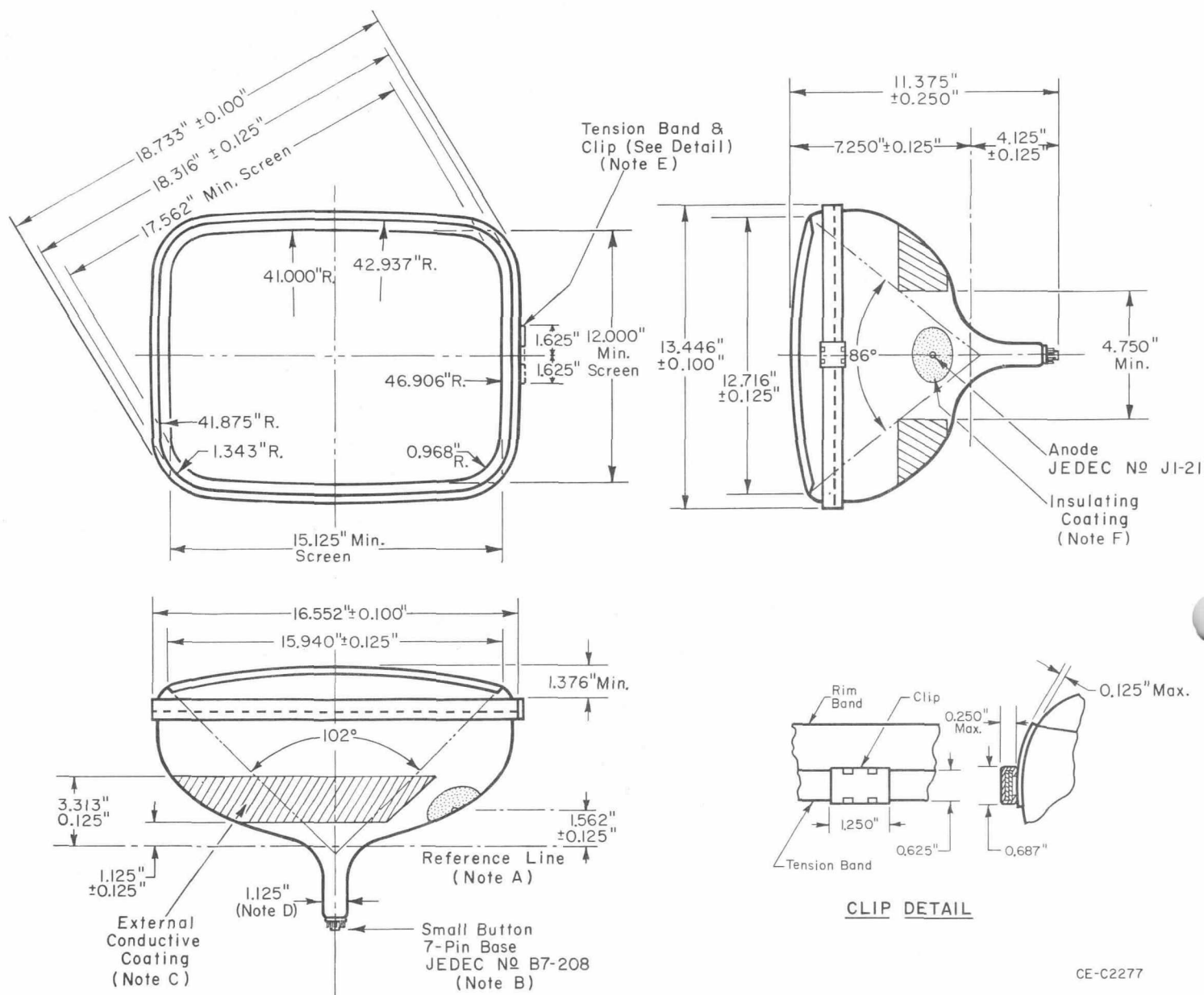
TYPICAL CATHODE DRIVE OPERATION

Unless Otherwise Specified, all Voltage Values are Positive with Respect to Grid 1.

Anode Voltage (Note 2) 20000 Volts
Grid 4 Voltage (Focusing Electrode) 200 Volts
Grid 2 Voltage (Note 5) 400 Volts
Cathode Voltage for Raster Cutoff 36 to 78 Volts

NOTES

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.
2. Operation with voltage in excess of 16 KV may require shielding to limit radiation of very soft X-rays.
3. Protective resistance in the grids 2 & 4 circuits is advisable to prevent damage.
4. With the cathode bias voltage and video-signal voltage adjusted to give an anode current of 150 microamperes on a 12" by 15.125" pattern from type 2F21 monoscope or equivalent. Individual tubes will have satisfactory focus at some value between 0 and 400 volts.
5. It is recommended that not less than 300 volts on grid 2 be used as resolution is affected at lower voltages.



CE-C2277

- A. Yoke Reference Line is determined by plane surface of flared end of JEDEC Reference Line Gauge No. 126 when seated on funnel of tube. With a minimum neck length tube, the PM centering magnet (0 to 8 gauss) should extend no more than 2.125" from Yoke Reference Line.
- B. Lateral strains on base pins must be avoided. The socket should have flexible leads permitting movement. The perimeter of the base wafer will be inside a 1.750" diameter circle concentric with tube axis. Base pin 4 aligns with major axis within 30° and is on same side as anode terminal.
- C. External conductive coating forms supplementary filter capacitance and must be grounded.
- D. Neck diameter may be a maximum of 1.168" at the splice.
- E. Tension band must be grounded.
- F. Transparent insulating coating 3" in diameter. Clean only with soft, dry, lintless cloth.

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