

14ACP4

National Video Corporation

4300 W. 47TH STREET CHICAGO 32, ILLINOIS
CLIFFSIDE 4-5600

The tube type 14ACP4 is an electrostatic focus and magnetic deflection direct view picture tube. The all glass 90° deflection bulb has a spherical filter-glass faceplate. The electron gun is designed to be operated at low G₂ voltages and cathode drive to improve the modulation characteristic. The tube has external conductive coating and the electron gun requires an ion trap. The screen has been aluminized for added brightness.

GENERAL CHARACTERISTICS

| | | |
|---|-----------------|----------|
| Focusing Method | Electrostatic | |
| Deflection Method | Magnetic | |
| Deflection Angle (Approx.) Horizontal | 85 | Degrees |
| Diagonal | 90 | Degrees |
| Face Plate Light Transmission (Neutral Density Filter) | 78% | Approx. |
| Phosphor | No. 4 | |
| Fluorescence | White | |
| Persistence | Short to Medium | |
| Direct Interelectrode Capacitances (Approx.) | | |
| Cathode to all other electrodes | 5 | uuf |
| Grid No. 1 to all other electrodes | 6 | uuf |
| External conductive coating to anode | 1200 | Max. uuf |
| | 800 | Min. uuf |

MECHANICAL DATA

| | | |
|---|----------------|------------|
| Overall Length | 14 3/16 ± 5/16 | Inches |
| Greatest Dimensions of Bulb: | | |
| Diagonal | 14 ± 1/8 | Inches |
| Width | 13 1/16 ± 1/8 | Inches |
| Height | 10 9/16 ± 1/8 | Inches |
| Minimum Useful Screen Dimensions (Max. Assured) | | |
| Screen Area | 104 | Sq. Inches |
| Diagonal | 13 | Inches |
| Width | 12 1/16 | Inches |
| Height | 9 1/2 | Inches |
| Bulb Contact | J1-21 | |
| Base | B6-63 | |
| Basing | 12L | |
| Bulb contact alignment | | |
| J1-21 contact aligns with pin position #6 | ± 30 | Degrees |

MAXIMUM RATINGS Design Center Values14ACP4

| | | |
|--|--------------|-----------------|
| Heater Voltage | 6.3 | Volts |
| Heater Current | 0.6 + 10% | Amperes |
| Anode Voltage ¹ | 11,000 | Max. Volts D.C. |
| Grid No. 4 Voltage | -500 to +500 | Max. Volts D.C. |
| Grid No. 2 Voltage | 200 | Max. Volts D.C. |
| Grid No. 1 Voltage | | |
| Negative peak value | 160 | Max. Volts D.C. |
| Negative bias value | 110 | Max. Volts D.C. |
| Positive bias value | 0 | Max. Volts D.C. |
| Positive peak value | 2 | Max. Volts D.C. |
| Peak Heater-Cathode Voltage | | |
| Heater negative with respect to cathode during warm-up period not to exceed 15 seconds | 410 | Max. Volts D.C. |
| After equipment warm-up | 180 | Max. Volts D.C. |
| Heater positive with respect to cathode | 180 | Max. Volts D.C. |

TYPICAL OPERATING CONDITIONS

| | | |
|---|-------------|------------|
| Anode Voltage | 10,000 | Volts D.C. |
| Grid No. 4 Voltage ² | -50 to +350 | Volts D.C. |
| Grid No. 2 Voltage | 125 | Volts D.C. |
| Grid No. 1 Voltage ³ | -40 to -80 | Volts D.C. |
| Field strength of PM ion trap magnet ⁴ | 36 | Min. Gauss |

MAXIMUM CIRCUIT VALUES

| | | |
|-------------------------------|-----|--------------|
| Grid No. 1 Circuit Resistance | 1.5 | Max. Megohms |
|-------------------------------|-----|--------------|

NOTES

¹Grid number four in this tube is the focus control electrode.

²With the combined grid No. 1 bias voltage and video signal adjusted to produce an anode current of 100 ua on a 12 1/16 x 9 1/2 inch picture adjusted for best overall focus. For other anode voltages, the focus voltage will be from 0% to 5.5%.

³Visual extinction of focused raster.

⁴For the specimen PM ion trap magnet such as the Heppner Model No. E437 or equivalent, positioned to give maximum brightness for a given equipment application, the tolerance range for the strength of the PM ion magnet should be added to the minimum value. The maximum strength of the magnet should not exceed the specified minimum value by more than 6 gauss. This procedure will insure use of the PM ion trap magnet allowing adequate adjustment to permit satisfactory performance without loss of highlight brightness.

NOTES

- NOTE 1: The plane through the tube axis and vacant pin position 6 aligns with the anode contact $\pm 30^\circ$.
- NOTE 2: Reference line is determined by the plane where the standard JETEC reference line gauge #116 will stop against the bulb.
- NOTE 3: Socket for this base should not be rigidly mounted. It should have flexible leads and be free to move.
- NOTE 4: Location of deflection yoke and centering device must be within this space.
- NOTE 5: Keep this space clear for ion-trap magnet.