**SYLVANIA TECHNICAL DATA**

*General Data for Cathode Ray Tube*

**JETEC Standard Form**

**Tylo **10HP4**

**DESCRRIPTIVE PARAGRAPH**

Tylo 10HP4 is a cathode ray picture tube for use in direct view television receivers. It uses electrostatic focusing and deflection and produces a 6 by 5 inch picture.

**GENERAL CHARACTERISTICS**

**Electrical**

- **Heater Voltage**: 6.3 ±10% Volts
- **Heater Current**: ±10% Amperes

**Focusing Method**: Electrostatic

**Deflecting Method**: Electrostatic

**Phosphor**: F4

- **Fluorescence**: White
- **Persistence**: Medium

**Direct Inter electrode Capacitances, Nominal**

- **Cathode to all other electrodes**: 9.5 uuf.
- **Grid #1 to all other electrodes**: 8.5 uuf.
- **G1 to D2**: 3.0 uuf.
- **D3 to D4**: 2.0 uuf.
- **D1 to all other electrodes except D2**: 7.5 uuf.
- **D2 to all other electrodes except D1**: 7.5 uuf.
- **D3 to all other electrodes except D4**: 6.0 uuf.
- **D4 to all other electrodes except D3**: 6.0 uuf.

**Mechanical**

- **Overall Length**: 19 1/4 ± 3/8 Inches
- **Greatest Diameter of Bulb**: 10 ± 1/8 Inches
- **Minimum Useable Screen Diameter**: 8 ± 1/4 Inches
- **Face JETEC Designation**: BI2-37
- **Base JETEC Designation**: 1400
- **Face Alignment**: 102 trace aligns with pin 5 and tube axis

- **Positive voltage on D1 deflects beam approx. toward pin 5**
- **Positive voltage on D3 deflects beam approx. toward pin 2**

**MAXIMUM RATINGS Design Center Values**

- **Anode No. 2 Voltage**: 5000 Max. Volts DC
- **Anode No. 1 Voltage**: 2000 Max. Volts DC
- **Grid No. 1 Voltage**
  - **Negative Bias Value**: -200 Max. Volts DC
  - **Positive Bias Value**: 0 Max. Volts DC
  - **Positive Peak Value**: 2 Max. Volts

- **Peak Heater-Cathode Voltage**
  - **Heater Negative with respect to cathode**: 125 Max. Volts DC
  - **Heater Positive with respect to cathode**: 125 Max. Volts DC
  - **Heater Negative with respect to cathode during equipment warm up period not exceeding 15 seconds**: 140 Max. Volts DC
  - **Peak Voltage between Anode No. 2 and any Deflection Electrode**: 600 Max. Volts
TYPICAL OPERATING CONDITIONS

For Anode No. 2 Voltage of 4000

5000 Volts

Anode No. 1 Voltage 560 to 1440

1200 to 1600 Volts

Grid No. 1 Voltage -48 to -72

-60 to -140 Volts

Deflection Factors:

D1 and D2 38 to 68

110 to 150 Volts DC per Inch

D3 and D4 68 to 92

85 to 115 Volts DC per Inch

Anode No. 1 Voltage 24% to 36% of Eb2 Volts

Grid No. 1 Voltage 1.2% to 2.8% of Eb2 Volts

Anode No. 1 Current for any operating condition 15 to 40 Microamperes

Deflection Factors

I1 and I2 22 to 30 Volts DC per Inch per Kilovolt of Eb2

I3 and I4 17 to 19 Volts DC per Inch per Kilovolt of Eb2

Spot Position (Undeflected) 20 Max Millimeters (Square)

MAXIMUM CIRCUIT VALUES.

Grid No 1 Circuit Resistance

1.5 Max. Megohms

Resistance in any Deflecting Electrode Circuit

5.0 Max. Megohms

CATHODE RAY TUBE CHARACTERISTICS

NOTES

1. Cathode should be returned to one side or to the mid-tap of the heater transformer winding.

2. Visual extinction of undeflected focused spot.

3. It is recommended that the deflecting-electrode-circuit resistances be approximately equal.

4. Connect free deflecting electrodes to second anode.
ESSENTIAL BULB DIMENSIONS

10" ± ¼"

8 ½"

USEFUL SCREEN DIAMETER

1" RADIUS

15" RADIUS

11 ½" RADIUS

19¼" ± ¼"

3"

2" ± ¼"

1½"

½"

BOTTOM VIEW OF BASE