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12YP4
Cathode-Ray Picture Tube

Rel. 1002

The T. E. I. 12 YP4 is a 12½" direct-view picture tube for use in television receivers and includes such features as:

- A 3° offset electron gun designed to be used with an external ion-trap magnet.
- An insulating band on the lower edge of the internal conductive coating assuring a sharper picture through the elimination of stray or spurious beams.
- Outside conductive coating
- Automatic electrostatic focusing.

DATA

General

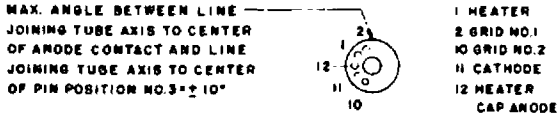
Heater voltage	6.3	volts
Heater current	0.6 ± 10%	ampere
Direct interelectrode capacitances (approx):		
Grid No. 1 to all other electrodes	6	μμf
Cathode to all other electrodes	5	μμf
Phosphor	No. 4	
Fluorescence	white	
Persistence	medium	
Focusing method	electrostatic	
Deflecting method	magnetic	
Deflection angle, (approx.)	54°	

Mechanical

Overall length	18¾" ± ⅜"
Greatest diameter of bulb	12⅞" + 1/16" — ⅛"
Minimum useful screen diameter	11¼"
Cap	Recessed small cavity
Base	Small shell duodecal 5-Pin
Basing	JETEC Designation 12D
Mounting position	Any
Net weight (approx.)	14½ lbs.

'Corresponding socket should not be rigidly mounted but should be wired with flexible leads and allowed to move freely.

Terminal Connections



Maximum Ratings (Design-Center Values)

Maximum anode voltage	12000 d-c	volts
Maximum grid-No. 2 voltage	410 d-c	volts
Grid-No. 1 Voltage:		
Maximum negative bias value	125 d-c	volts
Maximum positive bias value	0 d-c	volts
Maximum positive peak value	2 d-c	volts
Peak heater-cathode voltage: (Note 1)		
Maximum heater negative with respect to cathode	125	volts
Maximum heater positive with respect to cathode	125	volts
Grid-No. 1-circuit resistance	1.5	megohms

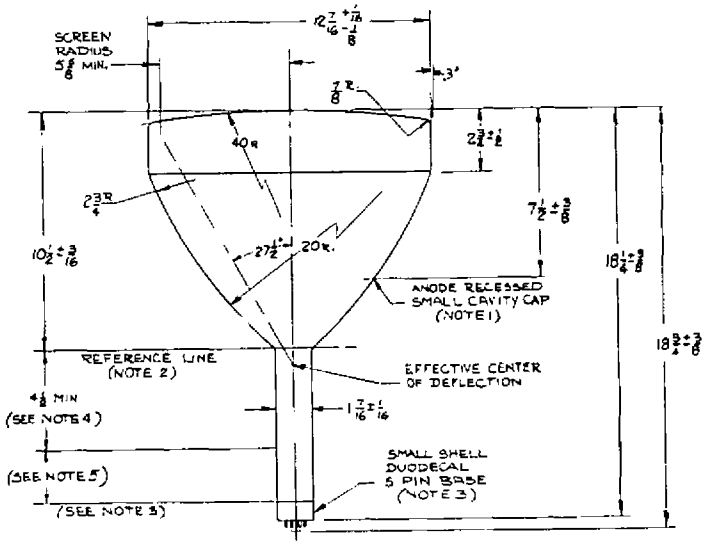
Typical Operating Conditions

Anode voltage	11000 d-c	volts
Grid-No. 2 voltage	250 d-c	volts
Grid-No. 1 voltage (Note 2)	—33 to —73 d-c	volts
External Conductive Coating	3000	μμf
Ion-trap current (Note 3) (approx.)	120 d-c	ma

NOTE: 1: A value of 410 max. volts is allowed during equipment warm-up period not to exceed 15 seconds.

NOTE 2: Visual extinction of undeflected focused spot.

NOTE 3: With JETEC standard ion-trap magnet of 40 gauss minimum.



NOTE 1: The plane through the tube axis and vacant pin position No. 3 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10°. Anode terminal is on same side as vacant pin position No. 3.

NOTE 2: Reference line is determined by position where hinged gauge 1.500" + .003" — .000" I.D. and 2" long will rest on bulb cone.

NOTE 3: Align ion-trap magnet with poles of coil A (large coil) adjacent L-shaped pole pieces on mount, north pole on same side as base pin No. 6, and the other poles toward the tube face.

NOTE 4: Location of deflecting yoke must be within this space.

NOTE 5: Keep this space clear for ion-trap magnet.

NOTE: Additional data will be furnished by our engineering department upon request.

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