

DESCRIPTION

Low voltage cathode ray tube for oscilloscopes

ELECTRICAL DATA

Heating

Heater voltage

6.3 V

Heater current

0.3 A

Focusing method

electrostatic

Deflection method

double electrostatic

 $D_1 D_2$ symmetrical $D_3 D_4$ symmetrical*Direct interelectrode capacitances* D_1 to all other electrodes except D_2 3.7 μF D_2 to all other electrodes except D_1 3.0 μF D_3 to all other electrodes except D_4 2.5 μF D_4 to all other electrodes except D_3 2.5 μF D_1 to D_2 1.7 μF D_3 to D_4 1.0 μF

Grid No. 1 to all other electrodes

7.6 μF

Cathode to all other electrodes

3.2 μF

OPTICAL DATA

Phosphor number

 P_1

Fluorescent color

yellowish green

Persistence

medium

MECHANICAL DATA

Cathode

coated unipotential

Outline

see drawing

Base

duodecal 12 p

Mounting position

any

LINE WIDTH

Measured on a circle of 2" diameter at

Grid No. 2 and 4 voltage = 500 V

Beam current = 0.5 μA

0.02"

MAXIMUM RATINGS (Design Center Values)

Grid No. 2 and 4 voltage

{ max. 800 V
min. 400 V

Grid No. 3 voltage

max. 200 V¹⁾Grid No. 1 voltage { negative
positive

max. 160 V

max. 0 V

Peak voltage between deflection plates D_1 and D_2

max. 750 V

Peak voltage between deflection plates D_3 and D_4

max. 450 V

Cathode to heater voltage

max. 125 V

Screen dissipation

max. 19.4 mW/sq. inch

Grid No. 2 and 4 dissipation

max. 0.5 W

MAXIMUM CIRCUIT VALUES

Grid No. 1 circuit resistance

max. 0.5 M Ω

Deflection plate circuit resistance

max. 5 M Ω

TYPICAL CHARACTERISTICS

Grid No. 2 and 4 voltage

500 V

Grid No. 3 voltage

0 to 120 V¹⁾

Negative grid No. 1 bias

50 to 100 V²⁾

Deflection factor $\begin{cases} D_1 D_2 \\ D_3 D_4 \end{cases}$

84.6-105.8 V/inch

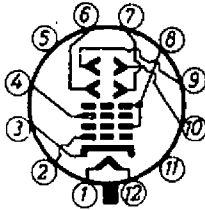
47.8-59.1 V/inch

LOCATION OF THE DEFLECTION PLATES WITH RESPECT TO THE BASE

The angle between a plane through the tube axis and perpendicular to the $D_1 - D_2$ deflection plates and a plane through the tubes axis and base-pin No. 9 is $90 \pm 10^\circ$.

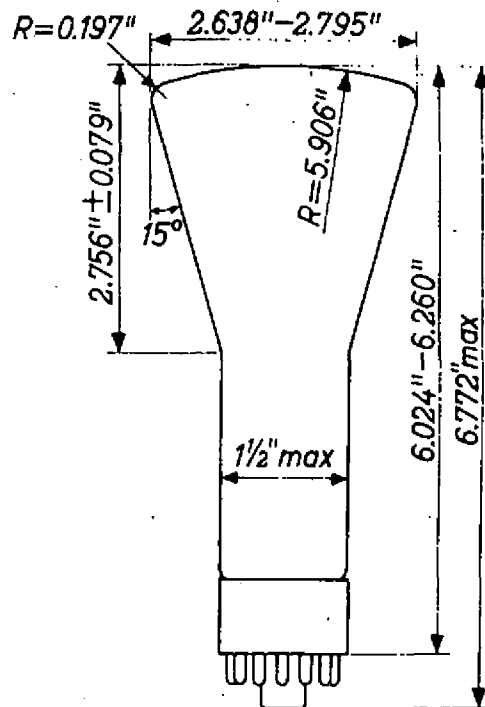
REMARK

A transparent conductive coating connected to $(g_2 + g_4)$ is present between glass and fluorescent layer. This makes possible application of the tube with $(g_2 + g_4)$ on high potential with respect to earth without the risk of the picture being distorted by touching the face. Moreover, the contrast will be improved.



BASE CONNECTIONS

- 1 - heater
- 2 - grid No. 1
- 3 - cathode
- 4 - grid No. 3
- 5 - no connection
- 6 - deflection plate D_3
- 7 - deflection plate D_4
- 8 - grid No. 2 and 4 - anode
- 9 - deflection plate D_1
- 10 - deflection plate D_2
- 11 - no connection
- 12 - heater



¹⁾ For calculation of the grid No. 3 potentiometer a grid No. 3 current of min. $-15 \mu A$ and max. $+10 \mu A$ must be taken into account.

²⁾ Negative grid No. 1 voltage for visual extinction of the focused spot.

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TYPICAL CHARACTERISTICS

Grid No.2 an 4 voltage

500 V

Deflection factor

$D_1 D_2$

84.6-105.8 V/inch

$D_3 D_4$

59.1-72.6 V/inch

For further data please refer to 3AMP1A