

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  $\mu\text{F}$   
 $D_2$  to all other electrodes except  $D_1$  3.0  $\mu\text{F}$   
 $D_3$  to all other electrodes except  $D_4$  2.5  $\mu\text{F}$   
 $D_4$  to all other electrodes except  $D_3$  2.5  $\mu\text{F}$   
 $D_1$  to  $D_2$  1.7  $\mu\text{F}$   
 $D_3$  to  $D_4$  1.0  $\mu\text{F}$   
 Grid No. 1 to all other electrodes 7.6  $\mu\text{F}$   
 Cathode to all other electrodes 3.2  $\mu\text{F}$

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  $\mu\text{A}$  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 V<sup>1)</sup>  
 Grid No. 1 voltage { negative max. 160 V  
 positive 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 $\Omega$   
 Deflection plate circuit resistance max. 5 M $\Omega$

## TYPICAL CHARACTERISTICS

Grid No. 2 and 4 voltage

500 V

Grid No. 3 voltage

0 to 120 V<sup>1)</sup>

Negative grid No. 1 bias

50 to 100 V<sup>2)</sup>

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

84.6-105.8 V/inch

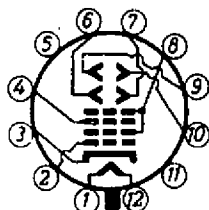
47.8-59.1 V/inch

## 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  $90 \pm 10^\circ$ .

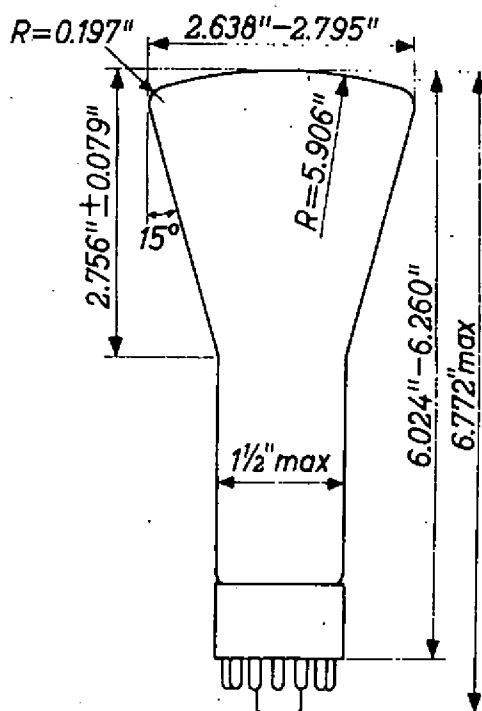
## REMARK

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



<sup>1)</sup> 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.

<sup>2)</sup> 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