PHILIPS ELECTRON DEVICES LTD

DESCRIPTION
Cathode ray tube for oscilloscopes

ELECTRICAL DATA

Heating
Heater voltage 6.3 V
Heater current 0.31 A

Focusing method  electrostatic
Deflection method  double electrostatic

Direct interelectrode capacitances

\[ D_1 \text{ to all other electrodes except } D_2 \]
\[ D_2 \text{ to all other electrodes except } D_1 \]
\[ D_3 \text{ to all other electrodes except } D_4 \]
\[ D_4 \text{ to all other electrodes except } D_3 \]
\[ D_1 \text{ to } D_2 \]
\[ D_3 \text{ to } D_4 \]
Grid No.1 to all other electrodes

\[ 2.8 \mu F \]
\[ 3.0 \mu F \]
\[ 3.3 \mu F \]
\[ 0.8 \mu F \]
\[ 0.6 \mu F \]
\[ 7.0 \mu F \]

OPTICAL DATA

Phosphor number  \( P_1 \)
Fluorescent color  yellowish green
Persistence  medium

<table>
<thead>
<tr>
<th>Persistence</th>
<th>( P_7 )</th>
<th>( P_{11} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>long</td>
<td>blue</td>
<td>medium short</td>
</tr>
</tbody>
</table>

MECHANICAL DATA

Cathode  coated unipotential
Outline  see drawing
Base  locatal 9 p
Mounting position  any

LINE WIDTH

Measured on a circle of 2" diameter at

Grid No.3 voltage = 800 V
Beam current = 0.5 \( \mu A \)

0.028"

MAXIMUM RATINGS (Design Center Values)

Grid No. 3 voltage  \( (\text{max. } 1000 \text{ V}) \)
Grid No. 2 voltage  \( (\text{min. } 800 \text{ V}) \)
Grid No. 1 voltage  \( (\text{negative, max. } 100 \text{ V}) \)
\( (\text{positive, max. } 0 \text{ V}) \)
Peak voltage between deflection plates \( D_1 \) and \( D_2 \)  \( \text{max. } 750 \text{ V} \)
Peak voltage between deflection plates \( D_3 \) and \( D_4 \)  \( \text{max. } 450 \text{ V} \)
Screen dissipation  \( \text{max. } 19.4 \text{ mW/sq. inch} \)

MAXIMUM CIRCUIT VALUES

Grid No. 1 circuit resistance  \( \text{max. } 0.5 \text{ M}\Omega \)
Deflection plate circuit resistance  \( \text{max. } 5 \text{ M}\Omega \)

OCTOBER 1962

from JEDEC release #4044, Dec. 24, 1962
TYPICAL CHARACTERISTICS
Grid No. 3 voltage 800 V
Grid No. 2 voltage 200 to 300 V
Negative grid No. 1 bias 0 to 50 V
Deflection factor \( \frac{D_1}{D_2} \)
\( \frac{D_3}{D_4} \)
160 V/inch
100 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 tube axis and base-pin No. 5 is 90 ±10°.

BASE CONNECTIONS

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heater and cathode</td>
</tr>
<tr>
<td>2</td>
<td>Deflection plate No. 3</td>
</tr>
<tr>
<td>3</td>
<td>Deflection plate No. 4</td>
</tr>
<tr>
<td>4</td>
<td>Grid No. 3 anode</td>
</tr>
<tr>
<td>5</td>
<td>Deflection plate No. 1</td>
</tr>
<tr>
<td>6</td>
<td>Deflection plate No. 2</td>
</tr>
<tr>
<td>7</td>
<td>Grid No. 2</td>
</tr>
<tr>
<td>8</td>
<td>Grid No. 1</td>
</tr>
<tr>
<td>9</td>
<td>Heater</td>
</tr>
</tbody>
</table>