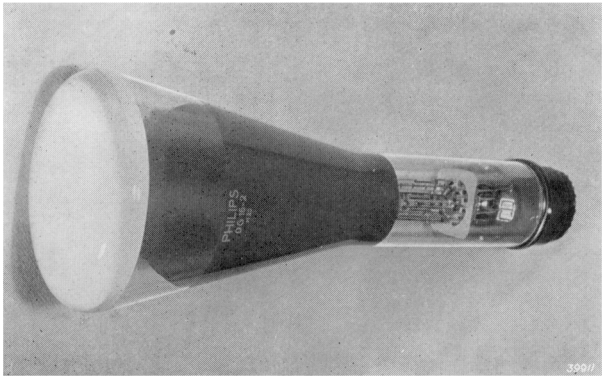
PHILIPS "Miniwatt" SPECIAL VALVES

ELECTRON-RAY TUBE DG16-2



CHARACTERISTICS

Heater voltage	V_f	=	4.0	V
Heater current	I_f	=	1.0	A
Anode voltage	V_{a_2}	= 1000	2000	V
Auxiliary anode voltage	V_{a_1}	= 200	400	V
Grid bias	V_g	= 0 to -20	0 to -35	V
Sensitivity of first pair of plates	N_1	= 0.54	0.27	mm/V
Sensitivity of second pair of plates	N_2	= 0.40	0.20	mm/V
Grid to cathode capacity	C_g	=	6.0	pF
Capacity between plates of first pair	$C_{D_1D_1'}$	=	2.5	pF
Capacity between plates of second pair	$C_{D_2D_2'}$	=	3.0	pF
Colour of spot		green (DG 16-2), blue (DB 16-2) persistent fluorescence (DN 16-2)		

SPECIAL ADVANTAGES

1. Brilliant trace and sharp spot
2. High deflection sensitivity
3. Easy to install and replace

DESCRIPTION

The DG 16-2 is a tube with a screen of fairly large diameter — about 16,5 cm; for the control of mass-production it is a particularly useful type, for the large image obtained permits precise measurement and the easy observation of very small variations.

The potential of the first anode should be adjusted so that the diameter of the spot is reduced to the minimum.

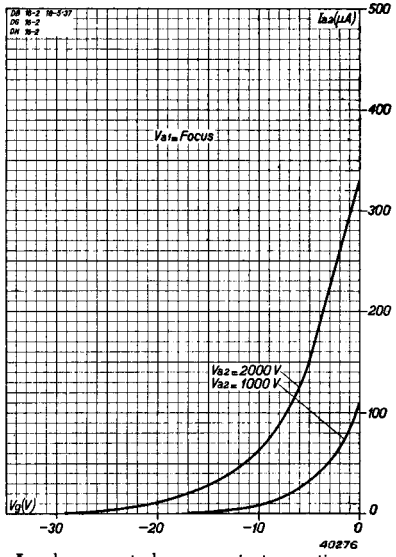
Deflection and focusing of the beam are achieved electrostatically. The deflection sensitivity is high: N_1 = 0,27 mm/V, N_2 = 0,20 mm/V with the second anode at a potential of 2000 V. Both pairs of plates are intended for symmetrical deflection.

The voltage on the second anode may be as much as 2000 V; at this potential an extremely clear, bright trace is obtained. With the second anode at 1000 V the sensitivity is higher, but for a given brightness the clarity of the trace is not quite as good. For the HT supply to the tube, the rectifier 1875 is very suitable. It is necessary to ensure that irregularities in the feed to the electron-ray tube anodes do not exceed 0,5%; a rough supply will impair the clarity of the spot.

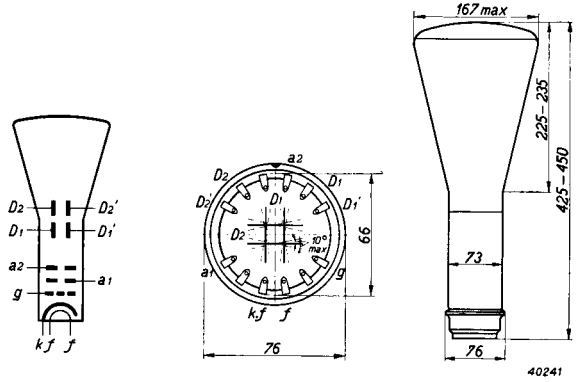
The green colour of the trace is suitable for both photographic recording and visual examination. In normal circumstances the maximum writing speed is 2,5 km per second. (See Electron-Ray Tubes - General).

As an alternative, the tube can be supplied with a persistent fluorescence screen, or with a blue screen; this latter colour is to be preferred when oscillograms are to be recorded on photographic paper.

All connections are brought out to contacts on the base, and installing or replacing the tube is simplicity itself.



Anode current shown against negative grid bias.



Arrangement of electrodes, connections and maximum dimensions in millimetres.