

UDG7

Osram

PHOTO CELLS

UDG7 PHOTO CELL

Cadmium Gasfilled

For detection and measurement of ultra violet radiation in the spectral range 2,500—3,000 A.U. which includes the Erythema region.

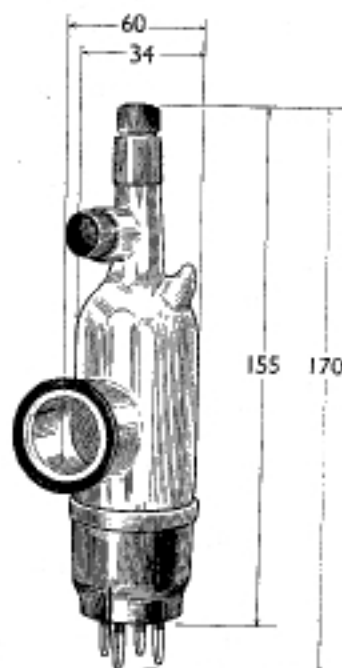
DESCRIPTION

This photocell has a cadmium cathode of the thick film type and is suitable for use in the range 2,500—3,000 A.U. (approx.). The bulb is fitted with a standard valve base to the anode and grid pins of which the light sensitive surface is connected. The anode of the photocell is taken to the screw cap at the top of the bulb. A side terminal makes connection to a guard ring deposited on the internal surface of the neck of the bulb and serves to shunt internal surface leakage between the electrodes. An external guard ring can be made by wrapping a few turns of bare copper wire round the neck of the bulb and connecting to the side terminal.

Radiation reaches the cathode through a quartz window which is attached to the glass bulb by a special gastight joint. A small circular glass disc will be found loose inside the bulb. This is inserted during manufacture to keep the cadmium from depositing on the quartz window. It should be shaken down into the well of the bulb when the cell is in use.

As in the case of all gasfilled cells, a resistance of at least 100,000 ohms should be included in the circuit in which this cell is used.

DIMENSIONS

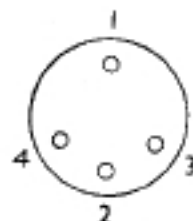


BASE

4-PIN

- Pin 1: Cathode
- 2: Cathode
- 3: Not connected
- 4: Not connected

Top screw cap: Anode
Side screw cap: Internal guard ring



View looking on underside of base.

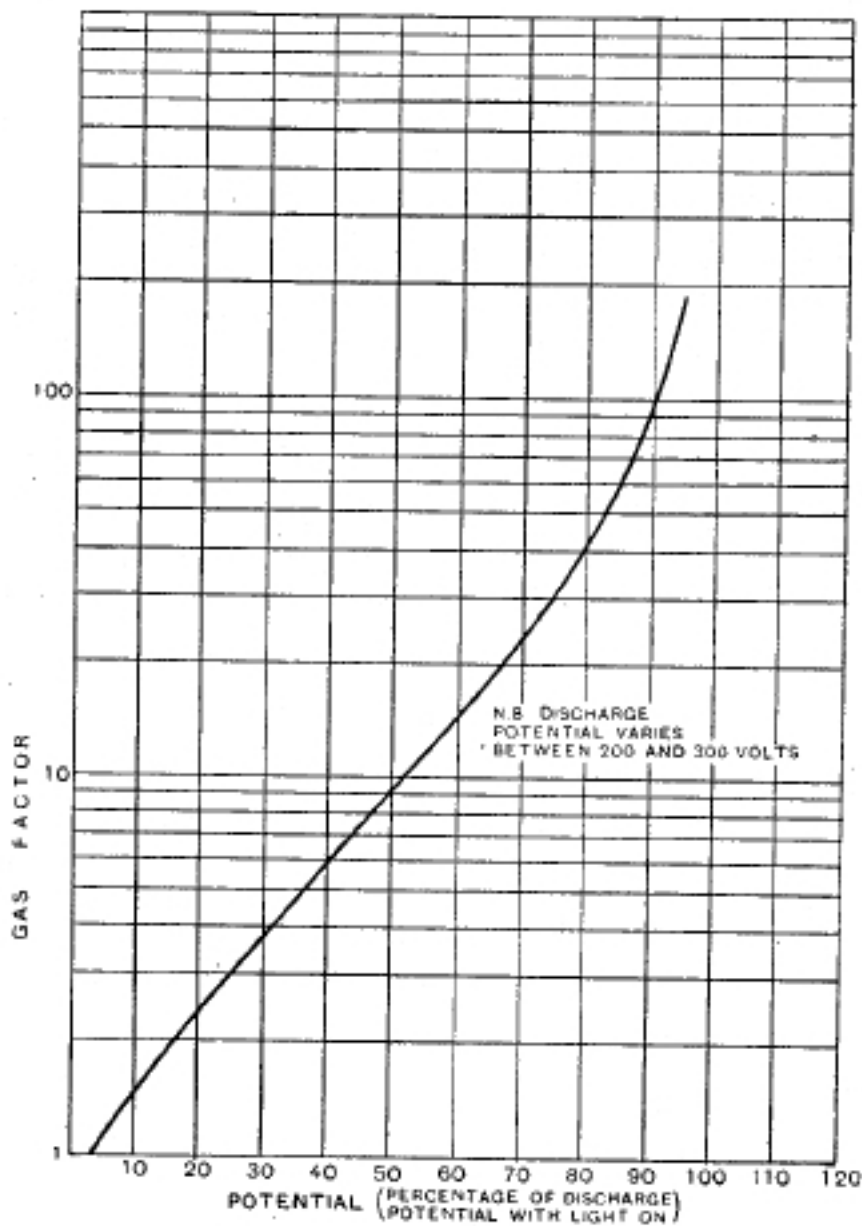
All dimensions are in mm. and are the maximum except where otherwise stated.

TYPE UDG7

If voltages in the upper portion of the curve of Fig. 3 are used to secure higher sensitivity, care must be taken to see that a glow discharge is not allowed to pass in the cell.

If allowed to continue for more than a few seconds the glow discharge will ruin the cathode.

If a linear relation between incident radiation and current is desired, the applied potential should not exceed 20 volts. Under these conditions the cell has practically the characteristics of a vacuum type with correspondingly lower sensitivity.



AVERAGE VOLTAGE-CURRENT CHARACTERISTIC
OF UDG7 TYPE PHOTOCCELL