

KG7

Osram

PHOTOCELLS

KG7 PHOTOCELL

Potassium Gasfilled

For detection and measurement of radiation from the blue end of the visible spectrum, particularly in the range 4,000-5,000 A.U.

DESCRIPTION

This photocell has a hydrogen-sensitised potassium cathode of the thick film type and is suitable for use in the blue end of the visible spectrum, particularly in the range 4,000-5,000 A.U.

The anode of the cell is in the form of a rectangular loop of nickel wire and is placed in the bulb symmetrically with respect to the cathode, which is deposited on the internal surface of the glass bulb. The cathode covers the whole of the internal cylindrical surface of the bulb except for a clear window which is the same shape as the anode, and through which the radiation is admitted to the cathode.

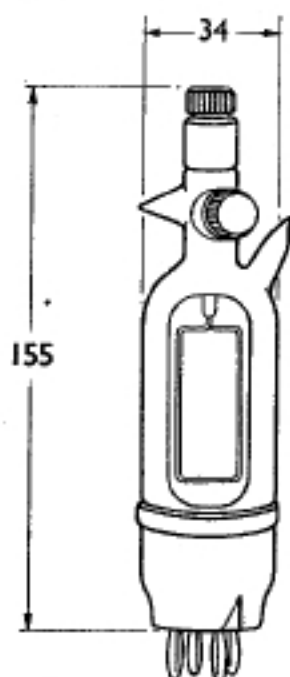
When used for the purpose of measurement the voltage applied to the cell through a suitable protective resistance should lie between 15 and 20 volts. Under such conditions the characteristics are practically those of a vacuum cell.

The cell should not be exposed to heat as a moderate rise of temperature may distil off the cathode deposit and ruin the cell.

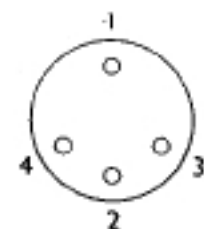
The primary emission of the KG7 cell normally lies in the range 0.1 to 0.8 $\mu\text{A}/\text{lumen}$ when the source of illumination is a tungsten gasfilled lamp at a colour temperature of 2848°K. For maximum sensitivity the cell may be safely used at a voltage such that the sensitivity is from 40 to 50 times the primary emission at 17 volts. The voltage at which this occurs is usually about 250 volts.

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. If high voltage is employed to secure increased sensitivity, care must be taken to avoid passing a glow discharge in the cell which, if allowed to pass for more than a few seconds, will ruin the cathode.

DIMENSIONS



BASE



View from underside of base.

4 PIN

- Pin 1: Cathode
- 2: Cathode
- 3: N.C.
- 4: N.C.

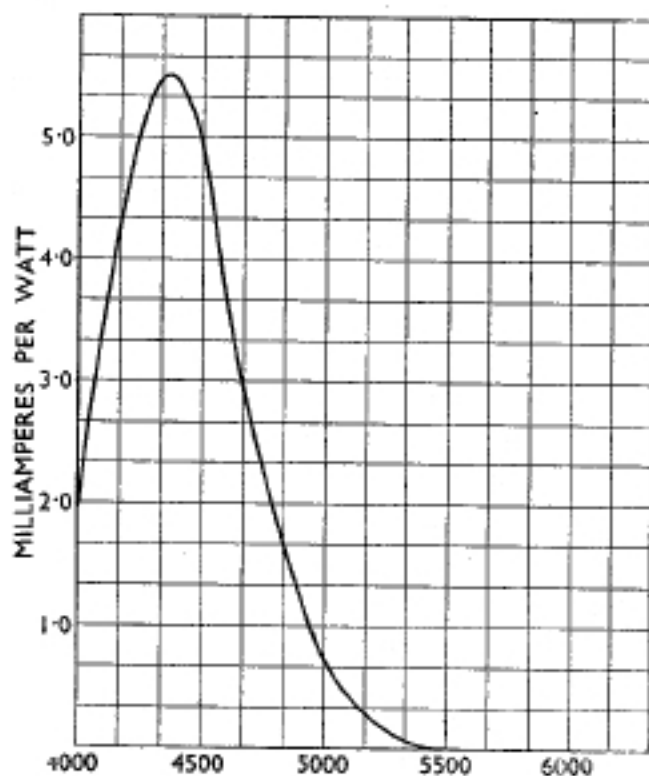
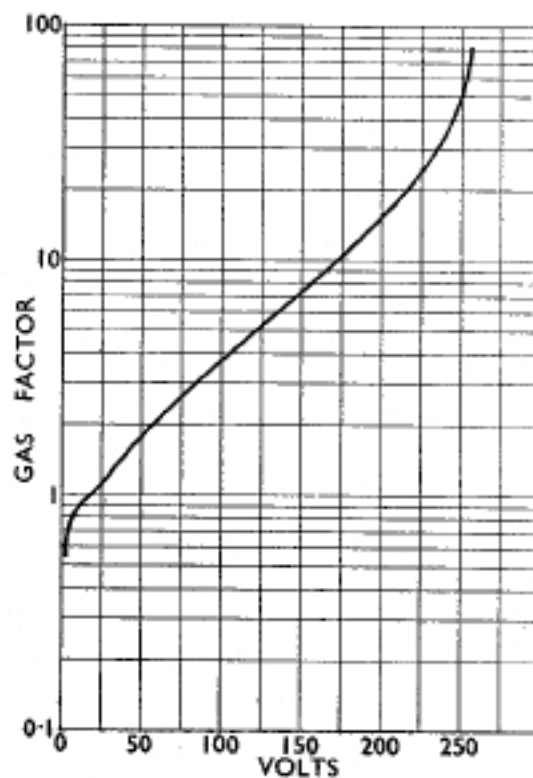
Top Screw Cap: Anode
Side Screw Cap: Internal Guard Ring

Light centre to base (excluding pins) 57 ± 3 mm.

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

TYPE KG7

AVERAGE VOLTAGE-CURRENT
CHARACTERISTIC OF KG. 7
TYPE PHOTOCELL.



AVERAGE SPECTRAL SENSITIVITY
CURVE.

(Equal distribution of energy in the
source of radiation.)