

**GENERAL**

The 27A12 is a vacuum Photo-Cell with a caesium antimony cathode surface, having maximum sensitivity in the blue region of the spectrum. It has a high sensitivity to daylight, but negligible infra-red response. It may be used for sound reproduction, counting applications, etc.

**RATINGS—Absolute values**

|                                                             |                |     |             |
|-------------------------------------------------------------|----------------|-----|-------------|
| Maximum working voltage                                     |                | 100 | V           |
| Maximum mean cathode current<br>(max averaging time 30 sec) | $I_{k(av)max}$ | 5.0 | $\mu A$     |
| Maximum ambient temperature                                 | $T_{amb(max)}$ | 70  | $^{\circ}C$ |

**INTER-ELECTRODE CAPACITANCE**

|               |           |     |    |
|---------------|-----------|-----|----|
| Anode/cathode | $C_{a-k}$ | 0.7 | pF |
|---------------|-----------|-----|----|

**CHARACTERISTICS**

|                                                  |                 |        |            |
|--------------------------------------------------|-----------------|--------|------------|
| Average overall sensitivity (approx)             |                 | 45*    | $\mu A/L$  |
| Maximum dark current                             | $I_{dark(max)}$ | 0.005† | $\mu A$    |
| Minimum insulation resistance between electrodes |                 | 20,000 | M $\Omega$ |

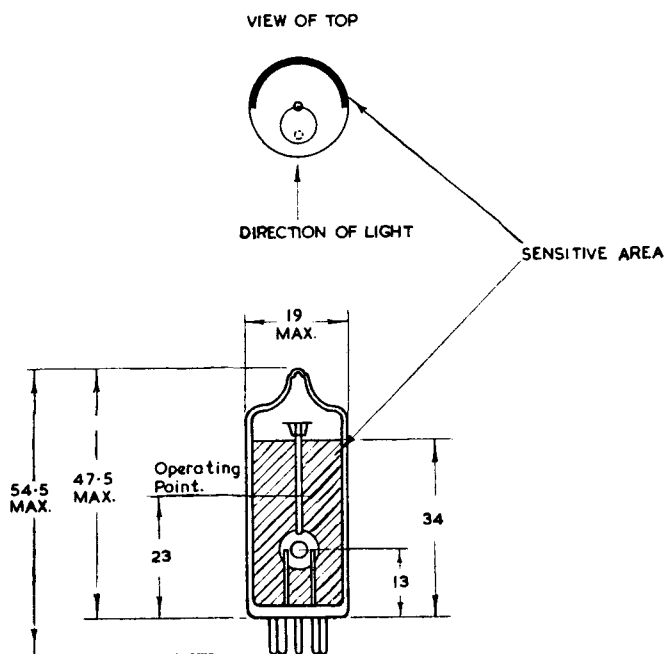
\* Measured at 0.04 lumens with a lamp colour temperature of 2700°K and a cell series resistance of 1.0M $\Omega$ . Anode voltage = 100V.

† Measured at 100V and 1.0M $\Omega$  series resistance, zero illumination.

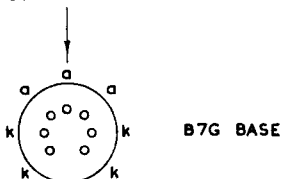
**DIMENSIONS**

|                            |         |
|----------------------------|---------|
| Maximum overall length     | 54.5 mm |
| Maximum seated height      | 47.5 mm |
| Light centre from seat     | 23 mm   |
| Maximum diameter           | 19 mm   |
| Approximate cathode width  | 18 mm   |
| Approximate cathode length | 32 mm   |

**MOUNTING POSITION—Unrestricted**



DIRECTION OF LIGHT



VIEW OF FREE END.

All dimensions in mm.

The cathode connection should be made to pins 1, 2, 6 and 7 connected together and the anode connection to pins 3, 4 and 5 connected together.

SPECTRAL RESPONSE OF ANTIMONY CAESIUM PHOTO-CATHODE

