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 (max averaging time 30 sec) $I_{k(\text{av})\text{max}}$ 5.0 $\mu$A
Maximum ambient temperature $T_{\text{amb(max)}}$ 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 $I_{\text{dark(max)}}$ 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$^\circ$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
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

[Graph showing spectral response with relative sensitivity on the x-axis and band length (μm) on the y-axis.

August, 1962

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