27J12

PHOTO-CELL

TENTATIVE

GENERAL

The 27J12 is a gas-filled Photo-Cell with a caesium-oxygen-silver cathode surface, having maximum sensitivity in the red region of the spectrum. It may be used for actuating electro-mechanical devices.

RATING—Absolute values

Maximum working voltage		90	V
Maximum mean cathode current (max averaging time 30 sec)	$I_{k(av)max}$	2·5	μA
Maximum peak cathode current	$i_{k(pk)max}$	8·0	μA
Maximum peak cathode current density		15	μA/cm²

INTER-ELECTRODE CAPACITANCE

Anode/cathode	c_{a-k}	1·1	pF

CHARACTERISTICS

Average overall sensitivity (approx)		125*	μA/L
Average primary sensitivity (approx)		20†	μA/L
Maximum gas amplification factor	$A_{g(max)}$	10**	
Maximum dark current	$I_{dark(max)}$	0·1‡	μA
Minimum insulation resistance between electrodes		2000	MΩ

* Measured at 0·02 lumens with a lamp colour temperature of 2700°K and a cell series resistance of 1·0MΩ. Anode voltage=90V.

** Gas amplification factor is a ratio of current at 90V to current at 25V under the conditions of note*.

† The primary sensitivity is measured at an anode voltage of 25V, at which ionization has not taken place.

‡ Measured at 90V and 1·0MΩ series resistance, zero illumination.

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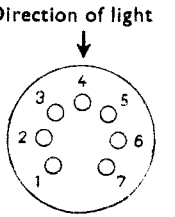
DIMENSIONS

Maximum overall length	54·5	mm
Maximum seated height	47·5	mm
Light centre from seat	19·5	mm
Maximum diameter	19	mm
Minimum cathode width	11·5	mm
Minimum cathode length	20·5	mm
Minimum projected cathode area	2·3	sq.cm

MOUNTING POSITION—Unrestricted

BASE—B7G



Viewed from free end of pins

CONNECTIONS§

Pin 1	Cathode	k
Pin 2	Cathode	k
Pin 3	Anode	a
Pin 4	Anode	a
Pin 5	Anode	a
Pin 6	Cathode	k
Pin 7	Cathode	k

§ 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.

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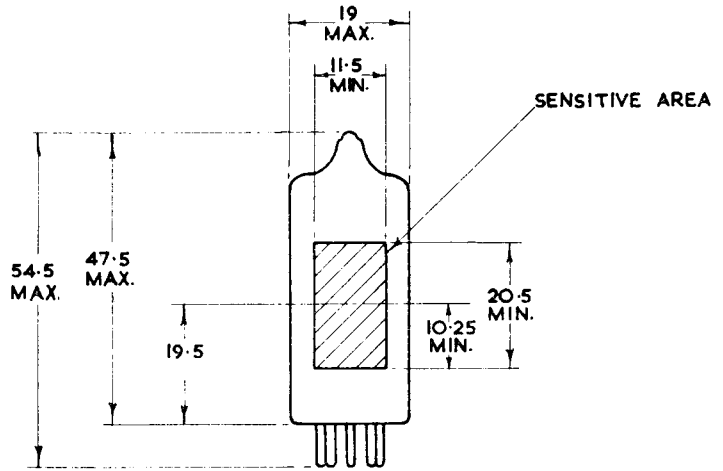
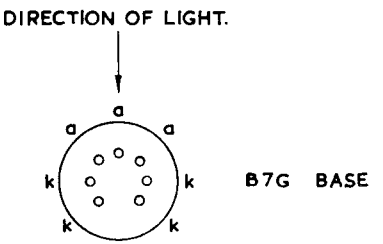


All dimensions in mm.



VIEW OF FREE END.

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