

Specification AD/CV250/Issue 4 Dated:- 3.12.47. To be read in conjunction with K1004.	<u>SECURITY</u>	
	<u>Specn.</u> Restricted	<u>Valve</u> Unclassified

→ indicates a change

<u>TYPE OF VALVE:-</u> Gas filled Photo-Electric Cell. <u>CATHODE:-</u> Caesium on silver or suitable alternative. <u>ENVELOPE:-</u> Glass. <u>PROTOTYPES:-</u> CMG25; G316 (90 V)	<u>MARKING</u>	
	See K1001/4	
	<u>BASE</u>	
	B4 See K1001/AIV/D5.1	
	Pin	Electrode
	1	Anode
	2	Cathode
	3	No connection
	4	No connection

<u>RATING</u>		Note	<u>DIMENSIONS</u>		
Min. Extinguishing Voltage (V)	100		A	See K1004/D1.	
Working Voltage (V)	80-110	B	Dimension	Min.	Max.
Min. Sensitivity (µA/lumen)	50		A mm.	97.5	107.5
			B mm.	24	26
			M mm.	71	-
			M' mm.	-	39
			N mm.	13	-
			<u>PACKAGING</u>		
			See K1005.		

NOTE THE FOLLOWING GENERAL REQUIREMENTS

- A. The extinguishing voltage shall never be less than 20 V above the rated working voltage of the tube.
- B. The working voltage, correct to the nearest 5 V, shall be marked on each individual cell in such a position that it does not interfere with the incident light flux.
- C. The spectral sensitivity shall correspond to the normal published characteristics of a Caesium on Silver Cathode or of an approved alternative cathode.

TESTS

To be performed in addition to those applicable in K1004.

	Test Conditions	Test	Limits		No. Tested	Note
			Min.	Max.		
a	Suitable light flux to be incident on the cathode. $V_a = x$ V (i.e. working voltage).	Sensitivity ($\mu\text{A}/\text{lumen}$)	55	75	100%	1,2
b	$V_a = x$ V. Cell shielded from all sources of light.	I_a (μA)	-	0.1	100%	
c	Suitable light flux to be incident on the cathode. Increase V_a to $x + 10$ V.	I_a after period of 30 secs. (= y μA say) I_a after further period of 60 secs. (μA)		$y + 10\%$	100%	1
d	Cell shielded from all sources of light. $V_a = x + 10$ V.	I_a (μA)		0.2	100%	
e	Cell shielded from all sources of light. $V_a = x + 20$ V.	I_a (μA)		0.2	100%	

NOTES

1. A suitable light flux for testing is 0.05 lumen. See also K1004/2.4.
2. The working voltage 'x' (also referred to in Notes A and B) is selected by the manufacturer, within the limits 80-110 V, such that the conditions of tests 'a', 'b' and 'c' are fulfilled.
3. All of the above tests will be carried out with a load resistance of not less than 0.1 Megohm in the anode circuit.