ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

VALVE ELECTRONIC **CV242**

Specification AD/CV242/Issue 6. Dated 18.10.48. To be read in conjunction with K1004.	SECURITY Specn. [redacted] Valve. Unclassified

→Indicates a change.

TYPE OF VALVE:- Gas-filled Photo-Electric Cell.

CATHODE:- Caesium on Silver, or approved alternative.

ENVELOPE:- Glass.

PROTOTYPE:- CMG25; GS18.

MARKING

See K1001/4. (Also Note 'B'). ←

BASE

B4

See K1001/AIV/D5.1.

DIMENSIONS

See Drawing Page 3. ←

RATING		Note
Working Voltage (V)	80-110	A
→ Maximum Voltage (V)	Wkg. Volts +10	
Min. Sensitivity (μA/lumen)	75	

CONNECTIONS

(Also Page 3.)

Pin	Electrode
1	Anode
2	Cathode
3	No connection
4	No connection

PACKAGING

See K1005.

NOTES

→ A. The working voltage is to be selected by the manufacturer, within the limits stated, and shall be such that the conditions of the tests on Page 2 are fulfilled. It shall be a multiple of 5 and is to be clearly and permanently marked on each cell.

→ B. The maximum voltage is considered to be the voltage which will never be exceeded at any time when the cell is illuminated; it is NOT to be marked on the cell.

TESTS

To be performed in addition to those applicable in K1004.

	Test Conditions		TEST (See Note 4)	Limits		No. Tested	Note
	Va (Volts)	Light Flux (Lumens)		Min.	Max.		
a	x	0.02	Sensitivity (μA/lumen)	75	-	100%	1,2, 3.
b	x	Nil	Dark Current (μA)	-	0.1	100%	1,3.
c	x + 10	0.02	There must be no uncontrolled discharge.	-	-	100%	1,2, 3.
d	x + 10	Nil	Dark Current (μA)	-	0.2	100%	1,3.
e	x + 20	Nil	Dark Current (μA)	-	0.2	100%	1,3.

NOTES

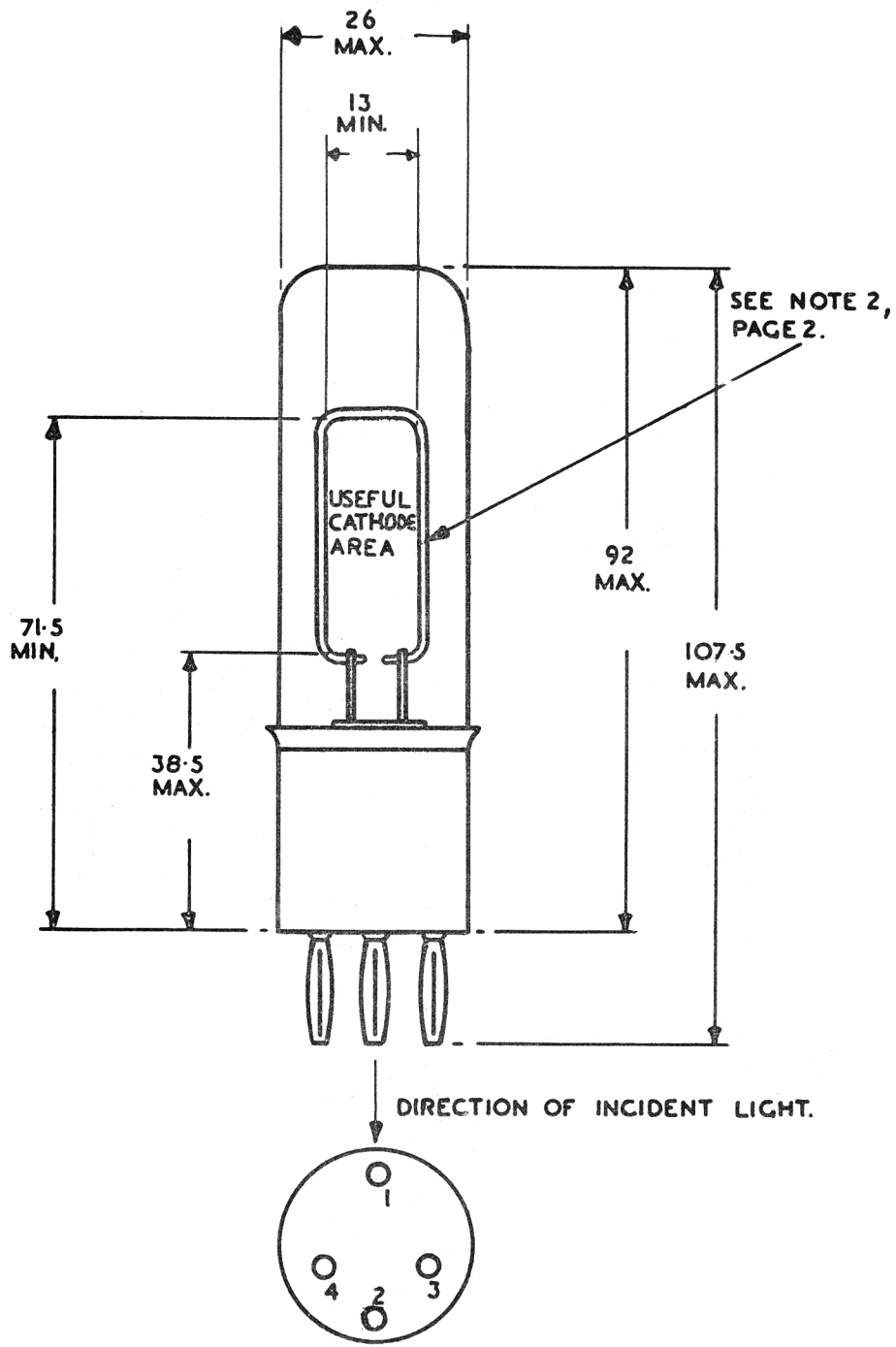
1. x = working voltage as defined in Note 'A', Page 1.

2. Light Flux is to illuminate the whole of the useful cathode area. (See drawing on Page 3.)

3. Test to be carried out with resistance of 100,000 ohms ± 5% connected in series with the anode circuit. All voltages in the above tests are measured across the cell and resistance in series.

4. Tests are to be carried out in the order given above, and test 'd' is to follow immediately after observing test 'c'.

CV242



ALL DIMENSIONS ARE IN MILLIMETRES.