ADMIRALTY SIGNAL ESTABLISHMENT

VALVE ELECTRONIC **CV250**

Specification AD/CV250/Issue 4
Dated:- 3.12.47.
To be read in conjunction with K1004.

SECURITY

Specn.	Valve
[illegible]	Unclassified

→ indicates a change

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

→ **CATHODE:-** Caesium on silver or suitable alternative.

ENVELOPE:- Glass.

PROTOTYPES:- CMG25; G316 (90 V)

RATING

			Note
Min. Extinguishing Voltage	(V)	100	A
Working Voltage	(V)	80-110	B
→ Min. Sensitivity	(μA/lumen)	50	C

MARKING

See K1001/4 ←

BASE

B4

See K1001/AIV/D5.1

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

DIMENSIONS

See K1004/D1. ←

Dimension	Min.	Max.
A mm.	97.5	107.5
B mm.	24	26
M mm.	71	-
M' mm.	-	39
N mm.	13	-

PACKAGING

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