ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

VALVE ELECTRONIC **CV1147**

Specification AD/CV1147/Issue 5.
Dated 28.4.53
To be read in conjunction with K1001.

SECURITY	
Specification	Valve
Unclassified	Unclassified

⟶ Indicates a change

TYPE OF VALVE:- Hot-cathode, mercury-filled, grid-controlled discharge tube.
CATHODE:- Indirectly heated.
ENVELOPE:- Glass.
PROTOTYPE:- BT5.

MARKING
See K1001/4.

BASE
USM4B
See K1001/AIV/D1.1

Pin	Electrode
1	Heater
2	Cathode
3	Grid
4	Heater
TC	Anode

Pins 2 and 4 are electrically connected inside the valve

TOP CAP

Dimension	Min.	Max.
Dia. mm.	15.87	16.67
Length mm excluding flared portion	12.7	

DIMENSIONS
See K1001/AI/D1

Dimension	Min.	Max.
A mm.	184	197
B mm.	79.4	81

PACKING
See K1005

RATING

			Note
Heater voltage	(V)	5.0	E
Heater current (approx.)	(A)	5.0	
Max. peak forward anode voltage	(V)	1000	
Max. peak anode current	(A)	12.5	
Minimum grid control ratio		63	A
Ambient temperature range	(°C)	15-40	B
Max. peak anode current at frequencies below 25 c/s.	(A)	5	

NOTES

A. Va = 500V. This ratio applies when the series grid resistance does not exceed 10,000 ohms.

B. Ambient temperature is defined as the temperature measured with a thermometer with its bulb or junction placed 2 ins. from the glass bulb of the valve, at the cathode end and on a level with the top of the base.

C. During testing the valve is to be mounted vertically with anode uppermost in an enclosure screened from draughts, with ambient temperature between 15°-30°C. except where otherwise stated.

D. Before operation or test, the valve must be preheated for 10 mins. with Vh = 5V.

E. Measured at valve pins.

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TESTS

To be performed in addition to those applicable in K1001.
See Notes B, C, D and E.

	Test Conditions				Test	Limits		No. Tested
	Vh (V)	Va (V)	Vg (V)	Ia (A)		Min.	Max.	
a	5.0	-	-	-	Ih (A)	4.2	5.2	100%
b	5.0	-	0	-	Va max. prior to striking of discharge (V)	-	70	100%
	D.C. +ive voltage applied to anode through 2500 ohms and increased until discharge occurs.							
c	5.0	-	0	2.5	Va (after 1 min.) (V)	-	16	100%
	Arc supplied from a D.C. source through series resistance which is adjusted to give required Ia.							
d	5.0	500	-	-	Min. negative grid bias prior to striking of discharge (V)	0	8	100%
	Series anode resistance 2500 ohms. Negative grid bias applied through 1000 ohms, and reduced until discharge occurs.							
e	5.0	500	-	-	Change in grid bias from value in test 'd' (V)	-	3	100%
	As in test 'd', with grid bias applied through 10 megohms, and reduced until discharge occurs.							