

ADMIRALTY SIGNAL ESTABLISHMENT

|   |                                    |                              |
|---|------------------------------------|------------------------------|
| Specification AD/CV1259 Issue No.2<br>Dated : 12/6/47.<br>To be read in conjunction with K1001,<br>ignoring clauses 5.2, 5.8. | <u>SECURITY</u>                    |                              |
|   | <u>Specification</u><br>Restricted | <u>Valve</u><br>Unclassified |

|  |                                      |      |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
|--|--------------------------------------|------|------|------------------|-----|-----|--------------------|------|-----|------------------------|-----|-----|------------------------------------|------|----|---------------------|------|-----|--|--|
| <u>TYPE OF VALVE</u> :- Half-wave Rectifier.<br><u>CATHODE</u> :- Directly heated - pure<br>or thoriated tungsten.<br><u>ENVELOPE</u> :- Glass.  | <u>MARKING</u><br>See K1001/4        |      |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| <u>RATING</u>  | <u>BASE AND CONNECTIONS</u>          |      |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| <table border="0"> <tr> <td>Filament Voltage</td> <td>(V)</td> <td>17.0</td> </tr> <tr> <td>Filament Current</td> <td>(A)</td> <td>6.6</td> </tr> <tr> <td>Max. Anode Voltage</td> <td>(kV)</td> <td>1.0</td> </tr> <tr> <td>Max. Anode Dissipation</td> <td>(W)</td> <td>450</td> </tr> <tr> <td>Max. peak inverse anode<br/>voltage</td> <td>(kV)</td> <td>20</td> </tr> <tr> <td>Min. total emission</td> <td>(mA)</td> <td>330</td> </tr> </table> | Filament Voltage                     | (V)  | 17.0 | Filament Current | (A) | 6.6 | Max. Anode Voltage | (kV) | 1.0 | Max. Anode Dissipation | (W) | 450 | Max. peak inverse anode<br>voltage | (kV) | 20 | Min. total emission | (mA) | 330 | Flexible leads.<br>Filament - at one end.<br>Anode - at side of globe.<br>Colours<br>F.F. : Yellow<br>A : Red<br>See Note A. |  |
| Filament Voltage   | (V)                                  | 17.0 |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| Filament Current   | (A)                                  | 6.6  |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| Max. Anode Voltage   | (kV)                                 | 1.0  |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| Max. Anode Dissipation   | (W)                                  | 450  |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| Max. peak inverse anode<br>voltage   | (kV)                                 | 20   |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| Min. total emission  | (mA)                                 | 330  |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| <u>NOTES</u>   | <u>DIMENSIONS</u><br>See K1001/AI/D3 |      |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| A. Each lead is to consist of 2<br>strands of 7/38 S.W.G. (or an<br>approved equivalent) with free<br>length of 330 mms. They are to<br>be protected in the re-entrant<br>seal by beads. The free length<br>of the leads is to be insulated<br>with flexible cambric tubing (or<br>suitable equivalent material) to<br>within 2" of the end, and<br>coloured as above. The insul-<br>ation must not be liable to alip.                                 | Dimension                            | Min. | Max. |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
|  | A mm                                 | 310  | 330  |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| B mm   | 160                                  | 175  |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| C mm   | 58                                   | 66   |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| F mm   | 25                                   | 35   |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| J mm   | -                                    | 42   |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
| K + M mm   | 15                                   | -    |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |
|  | <u>PACKING</u><br>See K1005          |      |      |                  |     |     |                    |      |     |                        |     |     |                                    |      |    |                     |      |     |  |  |

TESTS

To be performed in addition to those applicable in K1001.

|   | Test Conditions     |  |            | Test               | Limits   |      | No.<br>Tested |
|---|---------------------|--|------------|--------------------|--|------|---------------|
|   | Vf<br>(V)           | Va<br>(V)                                | Ia<br>(mA) |                    | Min.   | Max. |               |
| a   | 17.0                |  |            | If (A)             | 6.2  | 7.0  | 100%          |
| b   |                     | 400                                      | 330        | Vf (V)             | -  | 18   | 100%          |
| c   | 17.0                | AC 50~<br>Inverse<br>peak of<br>20,000 v |            | High Voltage Test  | No blue-<br>glow or<br>deterior-<br>ation must<br>occur. |      | 100%          |
| d   | Ad-<br>jus-<br>ted. | 1000                                     | 450        | Dissipation Vf (V) | -  | 17   | 100%          |
| For 10 mins. Ia must<br>be steady for last<br>3 mins. |                     |  |            |                    |  |      |               |