MINISTRY OF SUPPLY (R.R.D.E)

VALVE ELECTRONIC **CV498**

Specification MOS/CV498/Issue 3 Dated 9.5.53 To be read in conjunction with K1001, ignoring clauses 5.2, 5.8.	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

TYPE OF VALVE: Gas filled power indicator tube

CATHODE:- None
ENVELOPE:- Glass
PROTOTYPE:- CV359

MARKING

CV498 in black letters on a white background round the cap

BASE

None

RATING

This indicator tube is suitable for measuring peak powers between 250 kW. and 450 kW. in a concentric line feeder at frequencies of the order of 3300 Mc/s.

PACKING

See K1005

DIMENSIONS

See drawing on page 3

REQUIREMENTS

The gas filling shall be the standard commercial mixture of neon with 20% ± 0.5% Helium and 0.4% ± 0.1% Argon, Mercury free, at a pressure equivalent to 30 mm. of Mercury.

NOTE The CV498 differs from the CV359 by giving the glass protuberance beyond the cone seating a **maximum** dimension to enable the valve to be used with a concentric line feeder, with the result that the sensitivity of the CV498 is less than type CV359.

Z.4634.R.

CV 498

To be performed in addition to those applicable in K1001

	Test	No. Tested	Notes
a	Height of glow, at the full power available from the test gear shall be within ± 1 mm of height of glow in the standard tube.	100%	1, 2 & 3

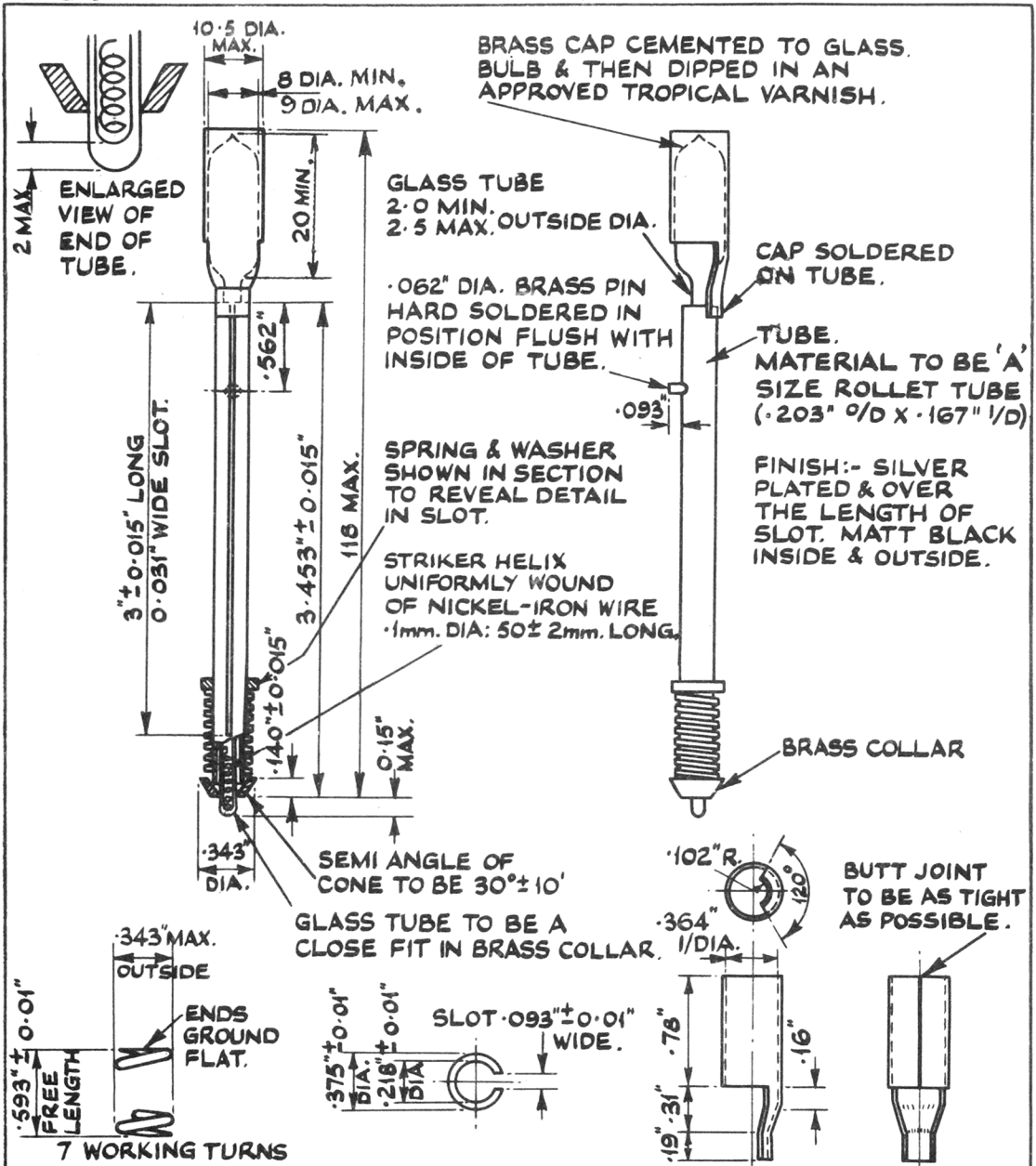
NOTES

1. These tests to be carried out at least 24 hours after tubes have been assembled in tube holders.

2. Tests to be carried out using a power source such as a CV160(E) magnetron driven by a modulator AS1522 delivering 200 kW to 300 kW at 3090 ± 10 Mc/s with 0.5 μ sec. pulse length and 1500 p.r.f. The power shall be fed into a special test unit, which will be supplied, and then into a concentric line feeder with approved termination giving a standing wave ratio less than 1.5 to 1.0. The test gear shall be set up to give the same glow height on a standard tube when it is inserted in each of two test sockets (placed approximately 1/2 λ apart) in turn, and this glow height shall not be less than 40 mm. The standard tube is then left in one socket and the tube under test is inserted in the second socket.

3. The Glow Height shall, in all cases, be measured from the outside surface of the concentric line feeder of the special test unit.

CV498.



DETAIL OF SPRING.
MAT^L :- PHOS. BRONZE WIRE 20 S.W.G. (·036")
FIN:- SILVER PLATED.

DETAIL OF WASHER
MAT^L :- BRASS 14 S.W.G. (·08")
FIN:- SILVER PLATED.

DETAIL OF CAP.
MAT^L :- BRASS 26 S.W.G. (·018")
FIN:- CLEANED.

DETAILS OF SPRING, WASHER & CAP.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED. TOLERANCE ON ALL INCH DIMENSIONS TO BE ±·005" UNLESS OTHERWISE STATED.