ADMIRALTY SIGNAL ESTABLISHMENT.

VALVE ELECTRONIC

CV279

Specification AD/CV279/Issue 6. Dated 13.6.47. To be read in conjunction with K1003	SECURITY Specn. Restricted	 Valve Unclassified

TYPE OF VALVE:- Cathode Ray Tube.

TYPE OF DEFLECTION:- Electrostatic; symmetrical.

TYPE OF FOCUS:- Electrostatic.

BULB:- Glass. Internally coated with conductive coating.

SCREEN:- GGN35. (Green; Willemite; no appreciable afterglow after 100 milliseconds).

PROTOTYPE:- NC16, but with degraded focus and steeper slope.

RATING

			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.1	
Max. 1st and 3rd Anode Voltage	(kV)	1.5	
Max. Cathode Current	(μA)	500	
Average Working 2nd Anode Voltage	(V)	250	A

MARKING

See K1003/7.1

BASE

12-pin spigot type

Pin	Electrode
1	Cathode
2	Modulator
3	Heater
4	Heater
5	2nd Anode (A2)
6	Pin omitted
7	Plate Y2
8	Plate X2
9	3rd Anode (A3) and graphite
10	Plate X1
11	Plate Y1
12	Pin omitted

DIMENSIONS

See page 4.

PACKING

See ~~K1003~~/8 K 1005 A

NOTES

A. At Va3 = 1.5 kV.

B. The design of the tube is to be such that the focus ratio is substantially independent of beam current. This feature will be checked at Type Approval.

TESTS

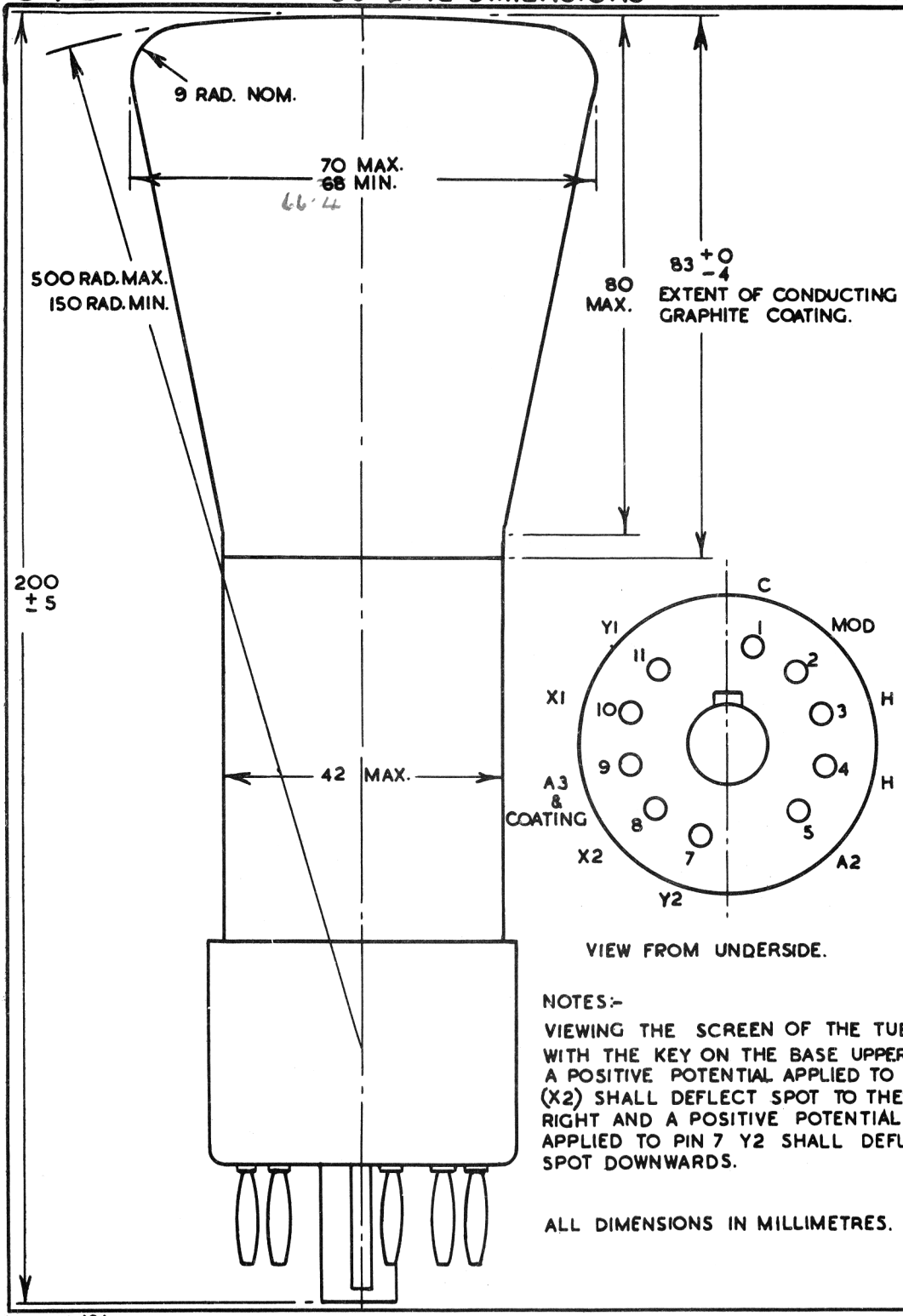
To be performed in addition to those applicable in K1003.

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
a		Capacitances (pF)			
		(i) Each X or Y plate to all other electrodes.	-	15	T.A.
		(ii) Mod. to all other electrodes.	-	20	T.A.
		(iii) Either X-plate to either Y-plate	-	3	0.5% (5)
	For all tests given below Vh = 4.0 V.				
b		Ih (A)	0.95	1.25	100% or S
c	Va3 = 1.5 kV See K1003/5.9	V mod. for cut-off (V)	-30	-45	100%
d	Va3 = 1.5 kV, V mod. = -12 V.	Light Output (Candles)	0.035	-	100%
e	(i) Va3 = 1.5 kV or (ii) Va3 = 800 V. Tube operated with an approved raster or 2 lines at right angles.	Useful screen Diameter (mm)	55	-	100%
f	As test 'e'	Va2 for optimum focus (V)	150 80	339 178	100%

TESTS Contd.

CV279

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested.
g	(i) Va3 = 1.5 kV or (ii) Va3 = 800 V. See K1003/5.4.2.	Modulator Electrode insulation (Megohm)	5	-	100%
h	As test 'g'	X and Y plate sensitivities (mm/V)	$\frac{145}{Va3}$	$\frac{195}{Va3}$	100%
j	As test 'g' See K1003/5.10.	Centring deviation (mm)	-	5	100%
k		Angle between X and Y-plate axes	85°	95°	1%
l		Angle between Y-plate axis and base diameter passing through centre of base spigot.	-	10°	100%
m	Va3 = 1.5 kV.	A characteristic curve of light output against V mod. shall be drawn, and shall show no significant signs of emission or screen saturation.			1%



NOTES:-

VIEWING THE SCREEN OF THE TUBE WITH THE KEY ON THE BASE UPPERMOST A POSITIVE POTENTIAL APPLIED TO PIN 8 (X2) SHALL DEFLECT SPOT TO THE RIGHT AND A POSITIVE POTENTIAL APPLIED TO PIN 7 Y2 SHALL DEFLECT SPOT DOWNWARDS.

ALL DIMENSIONS IN MILLIMETRES.

SPECIFICATION NO.AD/CV279. ISSUE 6 DATED 13.6.47.

AMENDMENT "B"

Page 4. Fig. 1. Dimensions

Neck diameter.

Amend to read :-

42 mm max.

40 mm min.

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Waterlooville,
Nr. Portsmouth.

8th July, 1948.