



5/03 HM

5/03 JM

5/03 LM

### RADAR TUBES

5in. diameter Display Tubes with metal backed screens, magnetic deflection and Low Voltage Electrostatic focus, suitable for small radar installations.

FOCUS	...	...	...	Low Voltage Electrostatic
DEFLECTION	...	...	...	Magnetic—Angle 53°
SCREENS				
*Phosphor Type	...	...	...	5/03HM 'H' 5/03JM 'J' 5/03LM 'L'
Fluorescence	...	...	...	Orange Blue Orange
Afterglow	...	...	...	Orange Yellow Orange
Persistence	...	...	...	Very long long long

All Types have metal backed screens.

For further details, refer to the relevant phosphor characteristics at the front of this section of the handbook.

#### PHYSICAL DETAILS.

Base	...	...	...	B12A (Duodecal).
Anode Cap	...	...	...	CT7. Recessed Ball Type.
Max. Overall Length	...	...	...	308 mm.
Min. Useful Screen Area	...	...	...	108 mm. dia.
Mounting Position	...	...	...	Any except vertical screen down.

For other dimensions see drawing.

These tubes can also be supplied with an external conductive coating in which case the Type Nos. are respectively 5/03HB, 5/03JB and 5/03LB.

#### BASE CONNECTIONS.

Pin 1—Heater	Pin 7—No Connection.
Pin 2—Grid	Pin 8—No Pin.
Pin 3—No Pin	Pin 9—No Pin.
Pin 4—No Pin.	Pin 10—1st Anode.
Pin 5—No Pin.	Pin 11—Cathode.
Pin 6—3rd Anode.	Pin 12—Heater.
Side Contact—2nd Anode, 4th Anode.	

#### HEATER.

Heater Voltage	...	...	...	6.3 volts.
Heater Current	...	...	...	0.3 amp.

#### RATINGS.

Max. A <sub>1</sub> Voltage	...	...	...	500 volts.
Min. A <sub>1</sub> Voltage	...	...	...	200 volts.
Max. A <sub>2</sub> + A <sub>4</sub> voltage	...	...	...	15 kV.
Min. A <sub>2</sub> + A <sub>4</sub> Voltage	...	...	...	8 kV.
Max. Pos. A <sub>3</sub> Voltage	...	...	...	+ 500 volts.
Max. Neg. A <sub>3</sub> Voltage	...	...	...	- 500 volts.
Max. V <sub>h-k</sub> (Heater positive)	...	...	...	200 volts.
Max. V <sub>h-k</sub> (Heater negative)	...	...	...	200 volts.
Max. R <sub>g-k</sub>	...	...	...	1.5 M Ω
Max. R <sub>h-k</sub>	...	...	...	1.0 M Ω

#### TYPICAL OPERATION

1st Anode Voltage	...	...	...	300 volts.
2nd + 4th Anode Voltage	...	...	...	12 kV.
†3rd Anode Voltage for focus	...	...	...	-300 to + 300 volts.
§V <sub>g</sub> for visual cut off	...	...	...	-30 to -70 volts.

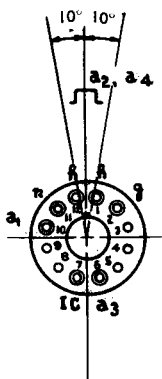
#### CAPACITANCES.

C <sub>k</sub> -all	...	...	...	<8 pF.
C <sub>g</sub> -all	...	...	...	<8 pF.

\*Phosphors Type 'H' and 'L' are liable to burn if operated with a stationary or slow moving spot, even at low values of beam current.

†Optimum focus lies between these values.

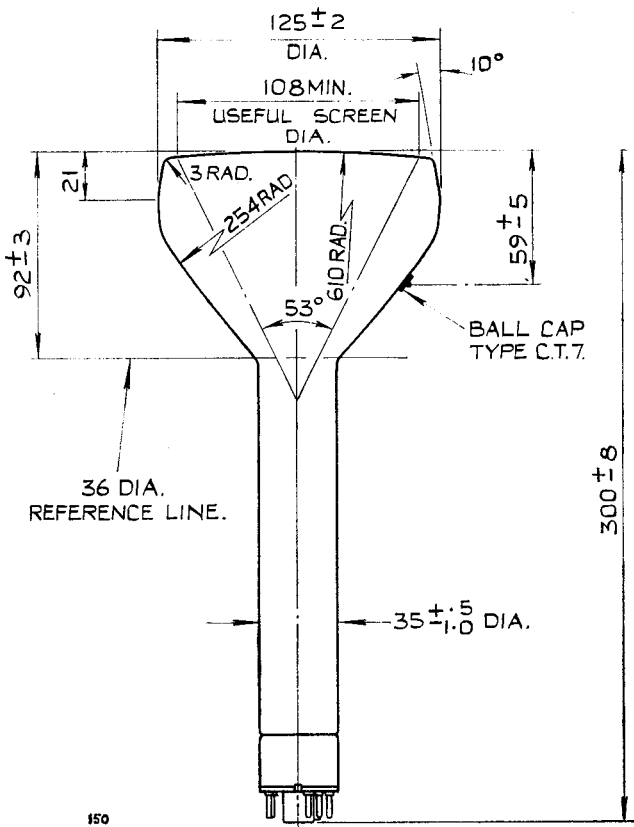
§The grid should never be positive with respect to the cathode except during the period immediately after switching off, when it may be allowed to rise to + 1 volt.



Base Connections  
Underside View of Base



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Dimensions are in millimetres