

Ferranti

RADAR TUBES

Miniaturised rectangular faced Display Tube designed for use in airborne radar equipments with transistor circuitry. The narrow neck diameter and narrow scan angle ensure full deflection with low scan power. The high modulation slope and the phosphor permit displays of conventional brightness with drive of the order of a few volts. With higher drive voltage, the high slope feature provides displays of high intensity for use in conditions of high ambient lighting.

FOCUS Low Voltage Electrostatic.

DEFLECTION Magnetic.

SCREEN.

*Phosphor Type 'L'.
 Fluorescence Orange.
 Afterglow Orange.
 Persistence Long.

PHYSICAL DETAILS.

Base B9A/D
 Anode Cap CTB Cavity Type.
 Max. Overall Length 257 mm.
 Neck Diameter 23 mm. (nom.)
 Mounting Position Any.

BASE CONNECTION.

Pin 1—Grid
 Pin 2—I.C.
 Pin 3—Cathode.
 Pin 4—Heater.
 Pin 5—Heater.
 Pin 6—I.C.
 Pin 7—3rd Anode.
 Pin 8—I.C.
 Pin 9—1st Anode.
 Side Contact—2nd & 4th Anodes.

HEATER.

		5 x 3/94 LM.	5 x 3/95 LM.
Heater Voltage	6.3	19.0 volts	
Heater Current	0.3	0.1 amp,	

† RATINGS & CHARACTERISTICS

Max. A₁ voltage 70 volts.
 Max. A₂+A₄ voltage 18 kV.
 Min. A₂+A₄ voltage 8 kV.
 Max. Neg. A₁ voltage -500 volts.
 Max. V_{h-k} 200 volts.
 A₃ voltage for focus 0 to -300 volts.

† TYPICAL OPERATION.

It is essential to employ cathode modulation, i.e., the grid should be operated at earth or some other fixed potential and all other voltages applied with reference to this point. This type of tube is inefficient under grid modulation conditions unless drive is also applied to A₁ in the same sense as that applied to the grid.

1. Short grid base conditions, where V_k is approx. +10v.

for visual cut-off.

Final Anode Voltage V_{A2+4} 15 kV.

V_{A1} -40 volts.

V_{A3} for focus -150 volts.

Under these conditions the zero bias beam current is approx. 150 microamperes.

2. For high brightness applications with a conventional drive range, where V_k is approximately +60 volts for visual cut off.

Final Anode Voltage V_{A2+4} 15 kV.

V_{A1} 0 volts.

Under these conditions the beam current at zero bias is approx. 2.5 mA.

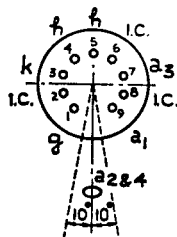
Versions with flying leads and encapsulated base and anode contact are also available.

*This phosphor is liable to burn if operated with a spot which is stationary or slow moving, and tubes should not be operated under such conditions, even at low beam current. Alternative phosphors for this application can be supplied on request.

†All potentials are referred to grid.

5X3/94LM

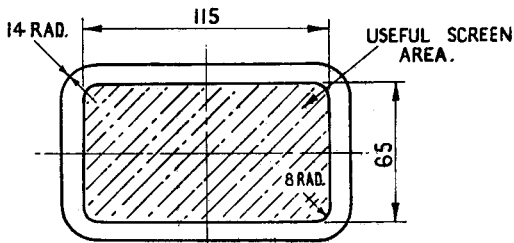
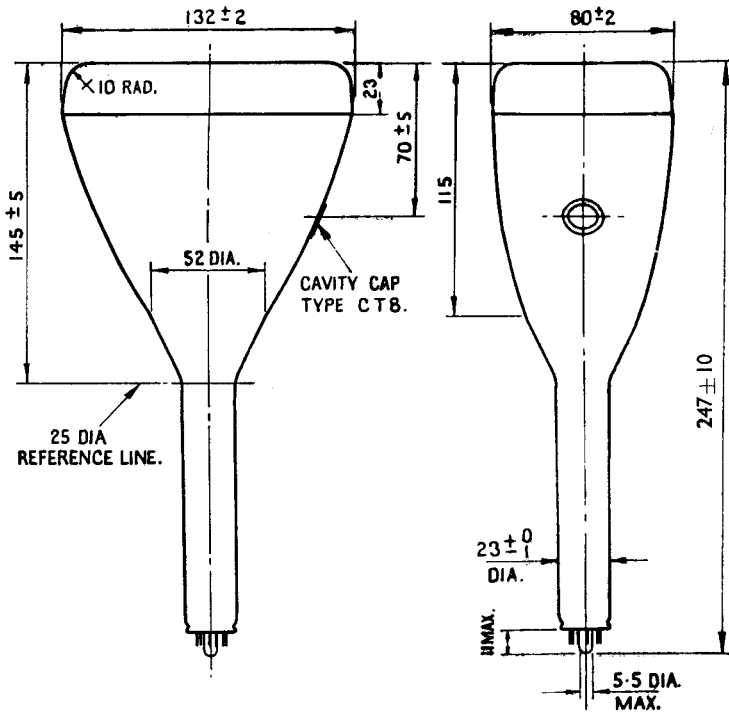
5X3/95LM



Underside view of base

5X3/94LM

5X3/95LM



DIMENSIONS ARE IN MILLIMETRES.