Ferranti

5G/14 AJ	5G/14 QJ
5G/14 PJ	5G/14 Q4J

HIGH RESOLUTION DISPLAY TUBES

High Resolution, High Light Output Display Tubes. The 5" diameter face is optically flat and is of non-browning glass.

FOCUS ..... Magnetic
DEFLECTION ..... Magnetic

SCREENS:

Type No.	Phosphor	Fluorescence	Approx. Persistence
5G/14AJ	A	Green	1 μSec.
5G/14PJ	P	Blue	2 μSec.
5G/14QJ	Q	Blue/Violet	0·1 μSec.
5G/14Q4J	Q_4	Blue/Violet	0·1 μSec.

Refer to phosphor characteristics at the front of this section of this handbook.

All types have metal backed screens.

PHYSICAL DETAILS:

Base ..... B12A (Duodecal)
Max. overall length..... 458 mm. (18·0 in.)
Min. useful screen area..... 108 mm. (4·25 in.)
Neck diameter ..... 37 mm. nominal
Min. length—Anode lead..... 380 mm. (15·0 in.)

For other dimensions see outline drawing overleaf.

The final anode lead is potted on to the tube and the neck has an external conductive coating.

BASE CONNECTIONS:

Pin 1—Heater	Pin 5—No pin	Pin 9—No pin
Pin 2—Grid	Pin 6—Not connected	Pin 10—Not connected
Pin 3—No pin	Pin 7—1st anode	Pin 11—Cathode
Pin 4—No pin	Pin 8—No pin	Pin 12—Heater

Flying Lead 2nd anode.

HEATER:

Heater Voltage ..... 6·3 volts
Heater Current ..... 0·3 amp.

RATINGS:

Max. 1st Anode voltage ..... 600 volts
Max. 2nd Anode voltage ..... 30 kV
Min. 1st Anode voltage ..... 300 volts
Min. 2nd Anode voltage ..... 15 kV
Max. $V_{h\text{-}k}$ (Heater Positive)..... 250 volts
Max. $V_{h\text{-}k}$ (Heater Negative)..... 150 volts
Max. $R_{h\text{-}k}$..... 1·0 MΩ
Max. $R_{g\text{-}k}$..... 1·5 MΩ

CAPACITANCES:

C_k - all..... $<$15·0 pF.
C_g - all..... $<$15·0 pF.

TYPICAL OPERATING CONDITIONS:

1st Anode voltage..... 500 volts
2nd Anode voltage..... 25 kV
V_g for visual cut off..... −105 volts

Resolution at Screen Centre:

Microscope Measurement—A and P Phosphors:

Line width measured by microscope to visual extinction (I_B=50μA) 125 microns.

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Resolution at Screen Centre (cont.):

Spatial Frequency Measurement:

A and P Phosphors

95 cycles/cm spatial frequency response at 60% modulation (I_B=1μA). Equivalent to 35 microns. 30 cycles c/m spatial frequency response at 60% modulation (I_B=50 μA). Equivalent to 100 microns.

Q and Q_4 Phosphors

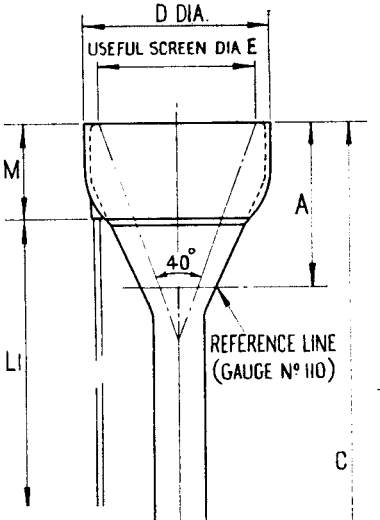
85 cycles/cm spatial frequency response at 60% modulation (I_B=1μA). Equivalent to 37 microns. 25 cycles/cm spatial frequency response at 60% modulation (I_B=50 μA). Equivalent to 130 microns.

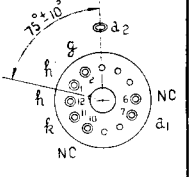
The position of the centre of the air gap in the focus-coil should be approximately 210 mm. from the tube face.

X-RAY WARNING:

When operated at an anode voltage in excess of 16kV. X-ray shielding may be required to give protection against the possible danger of injury from prolonged exposure at close range.

This type of tube is also available with the core coated with a thick layer of plastic resin.





Dim.	mm.	Ins.
A	117·5±4·5	4·62±·18
C	451±6·3	17·75±·25
D	133·4±1·5	5·25±·06
E	108 min.	4·25
F	37 $^{+\cdot5}_{-1\cdot5}$	1·457 $^{\pm\cdot020}_{-\cdot059}$
L1	380 min.	15·0 min.
M	70	2·75