HIGH RESOLUTION CATHODE RAY TUBES

5" diameter high resolution triode tubes having optically flat faces with ground internal and external surfaces.

FOCUS ... Magnetic
DEFLECTION ... Magnetic—Angle 60°
SCREEN 5/21AM 5/21PM 5/21QM
Phosphor Type 'A' 'P' 'Q'
Fluorescence Green Blue Blue/Violet
Persistence Ultra Short Ultra Short Killed

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 ... CTB (Cavity type)
(JEDEC type J1-21)
Max. Overall Length ... 350 mm.
Max. Diameter ... 128 mm.
Nom. Neck Diameter ... 37 mm.
Min. Useful Screen Area ... 110 mm.

For other dimensions see drawing overhead.

BASE CONNECTIONS
Pin 1—Heater
Pin 2—Grid
Pin 3—No pin
Pin 4—No pin
Pin 5—No pin
Pin 6—Not connected

Pin 7—Not connected
Pin 8—No pin
Pin 9—No pin
Pin 10—Not connected
Pin 11—Cathode
Pin 12—Heater

Side contact—Anode

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

RATINGS
Max. Anode Voltage ... 25 kV.
Nom. $V_g$ for visual cut-off ... $V_a/210$
Max. $V_{hk}$ (heater negative) ... 200 volts
Max. $V_{hk}$ (heater positive) ... 200 volts
Max. $R_{ge}$ ... 1.5 MΩ

TYPICAL OPERATION
Heater Voltage ... 6.3 volts
Anode Voltage ... 20 kV.
$V_g$ for visual cut-off ... ~90V
Screen resolution ... 1000 lines per inch.

CAPACITANCE
$C_{k-all}$ ... <8 pF
$C_{g-all}$ ... <8 pF

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.

*At screen centre. Measured by shrinking raster method.

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Dimensions are in millimetres.

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TYPICAL BEAM CURRENT/GRID VOLTAGE CHARACTERISTIC

GRID VOLTAGE

BEAM CURRENT (mA)

25 kV
15 kV
Typical Screen Brightness Characteristics

Screen Brightness (Foot/Lamberts)

Beam Current (mA)

0 10 15 20 25 30 35

0 5 25 50 75 100

P Screen

Q Screen

Measured on a 2x2' raster with an eye corrected filter.