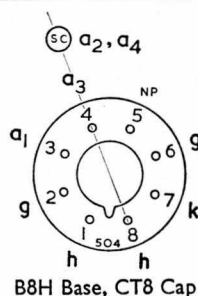


TELEVISION PICTURE TUBE



GENERAL

Twin Panel	Tinted Grey Glass
Deflection Angle	110° Diagonal
Rectangular Face	23 in. Diagonal
Light Transmission	45% Approximately
Aluminised Screen	White Fluorescence
Electrostatic Focus	Magnetic Deflection
Short Neck	Straight Gun—non ion trap
External Conductive Coating	

Heater Current	I_h	0.3	A
Heater Voltage	V_h	6.3	V

The cathode ray tube heater should always be connected at the chassis end if used in a series heater chain.

DESIGN CENTRE RATINGS

Maximum Second and Fourth Anode Voltage	$V_{a2,a4(max)}$	20*	kV
Minimum Second and Fourth Anode Voltage	$V_{a2,a4(min)}$	13	kV
Maximum Third Anode Voltage	$V_{a3(max)}$	+1000 to -500	V
Maximum First Anode Voltage	$V_{a1(max)}$	700	V
Maximum Heater to Cathode Voltage, Heater Negative (d.c.)	$V_{h-k(max)}$	250	V
Maximum Peak Heater to Cathode Voltage, Heater Negative	$V_{h-k(pk)max}$	400†‡	V
Maximum Impedance Grid to Cathode (50c/s)	$Z_{g-k(max)}$	0.5	MΩ
Maximum Resistance Grid to Cathode	$R_{g-k(max)}$	1.5	MΩ
All voltages referred to cathode.			

* For $I_{a2+a4}=0$.

† Absolute rating.

‡ During a warming-up period not exceeding 45 seconds.

Note : The A59-13W is the AW59-91 with the addition of a tinted glass panel.

Tubes incorporating a B8H sparkguard base will have a suffix S after the type number. For details of the sparkguard base see separate sheet.

INTER-ELECTRODE CAPACITANCES

Cathode to all	C_{k-all}	$\frac{\phi}{\phi}$ 3.0	3.5	pF
Grid to all	C_{g-all}	7.0	8.5	pF
Second and Fourth Anode to External Conductive Coating (approx.)	$C_{a2,a4-M}$	2000		pF

ϕ Inter-electrode capacitances with holder capacitance balanced out.

ϕ Total inter-electrode capacitances including AEI B8H holder VH68/81 (8 pin).

TYPICAL OPERATION—Grid Modulation (Voltage referred to cathode)

Second and Fourth Anode Voltage	$V_{a2,a4-k}$	18	18	kV
First Anode Voltage*	V_{a1-k}	400	500	V
Beam Current	I_{a2+a4}	350 500	350 500	μA
Third Anode Voltage Range for Focus	V_{a3-k}	0 to 400	0 to 400	V
Average Peak to Peak Picture Modulating Voltage		35.5 40.5	39.5 45	V
Grid to Cathode Voltage for Cut-off of Raster (See charts for limits)	V_{g-k}	-57	-69	V

TYPICAL OPERATION—Cathode Modulation (Voltage referred to grid)

Second and Fourth Anode Voltage	$V_{a2,a4-g}$	18	18	kV
First Anode Voltage*	V_{a1-g}	400	500	V
Beam Current	I_{a2+a4}	350 500	350 500	μA
Third Anode Voltage Range for Focus	V_{a3-g}	0 to 400	0 to 400	V
Average Peak to Peak Picture Modulating Voltage		31.5 35.5	34.5 39.5	V
Cathode to Grid Voltage for Cut-off of Raster (See charts for limits)	V_{k-g}	51	62	V

* Within this range a higher First Anode Voltage will provide an improved focus performance.

PICTURE CENTRING

Maximum magnet flux density at centre of neck should not be less than	17 G
Maximum distance of centre of magnetic field from reference line	53 mm

NOTE

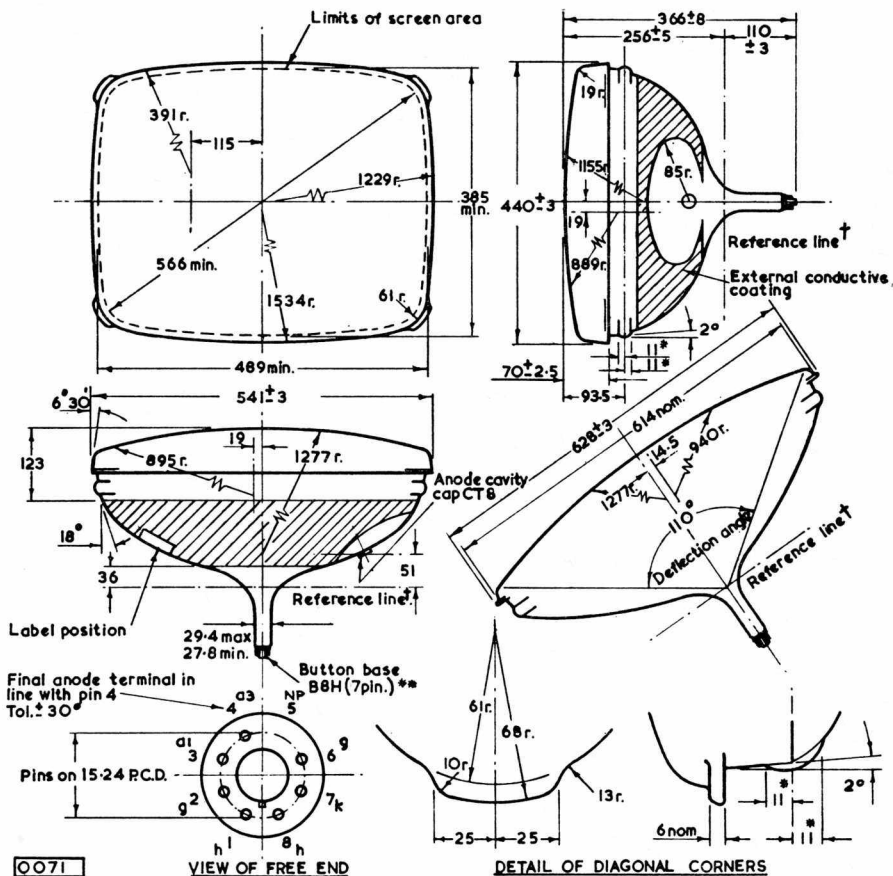
If this tube is operated at voltage in excess of 16kV, x-ray radiation shielding may be necessary to avoid possible danger of personal injury from prolonged exposure at close range.

DEFLECTION ANGLES

Height	82°
Width	99°
Diagonal	110°

WEIGHT

Approximate Single Tube Weight : Net	37.5 lb (17 kg)
--------------------------------------	-----------------



All dimensions in mm.

Not to be scaled.

Notes :

* During the face sealing operation the glass in this area (total 22mm) may be disturbed. As the shape of the contour within this area may be either convex or concave the bulb should not be gripped within this region unless special precautions are taken (such as the use of resilient packing material).

**The socket for the B8H button base should not be rigidly mounted, it should have flexible leads and be allowed to move freely. The design of the socket should be such that the wiring cannot impress lateral strains through the socket contacts on the base. Bottom circumference of base wafer will fall within a circle concentric with the bulb axis and have a diameter of 44mm.

† Determined by Reference Gauge No.16 (JEDEC 126).

The tube may be supported by clamping to the mounting lugs provided at each corner of the protective panel.

Tube mounting clamps must be spaced from the tube by the use of cushioning pads.

