30B1

CATHODE RAY TUBE—ALL ELECTROSTATIC $3\frac{1}{2}$" Dia.

Indirectly heated high grade precision measurement cathode ray tube with a polished flat face

RATING

Heater Voltage (volts)	V_h	4.0
Heater Current (amps)	I_h	0.72
Maximum 1st Anode Voltage (volts)	$V_{a1(max)}$	2,500
Maximum 2nd Anode Voltage (volts)	$V_{a2(max)}$	1,000
Maximum 3rd Anode Voltage (volts)	$V_{a3(max)}$	6,000
Average Sensitivity of "X" Plates (mm/V)		* 420/V ←
Average Sensitivity of "Y" Plates (mm/V)		* 840/V ←

Where "V" denotes the voltage on the 3rd Anode and bulb coating.

INTER-ELECTRODE CAPACITANCES

X1 Deflecting Plate/All other electrodes	(μμF)	$C_{x1,all}$	15.0
X2 Deflecting Plate/All other electrodes	(μμF)	$C_{x2,all}$	15.0
Y1 Deflecting Plate/All other electrodes	(μμF)	$C_{y1,all}$	14.5
Y2 Deflecting Plate/All other electrodes	(μμF)	$C_{y2,all}$	14.5
X1 Deflecting Plate/Y1 Deflecting Plate	(μμF)	$C_{x1,y1}$	1.5
X1 Deflecting Plate/Y2 Deflecting Plate	(μμF)	$C_{x1,y2}$	1.0
X2 Deflecting Plate/Y1 Deflecting Plate	(μμF)	$C_{x2,y1}$	1.0
X2 Deflecting Plate/Y2 Deflecting Plate	(μμF)	$C_{x2,y2}$	1.25
Control Grid (Wehnelt)/All other electrodes (μμF)		$C_{g,all}$	9.5

DIMENSIONS

Maximum Overall Length (mm)	340
Maximum Diameter (mm)	90
Nominal Screen Diameter (inches)	$3\frac{1}{2}$
Approximate Nett Weight (ozs)	21
Approximate Packed Weight (lbs)	$10\frac{3}{4}$

NOTES

For general measurement work the 30.B.1/P1 is recommended. This has a screen with a medium persistence green phosphor. For special applications, however, the tube may be supplied with any of the standard phosphors described on the Introductory Page to this section.

Final Anode and Bulb coating are brought out separately in order to enable a finer spot or a higher writing speed to be obtained by increasing the Final Anode voltage above the limit set for the 1st Anode Voltage.

In use the 3rd Anode and bulb coating are normally joined.

All maximum ratings are absolute values not design centres. ←

Associated Electrical Industries Limited

Electronic Components Division

Tel.: GERRARD 9797

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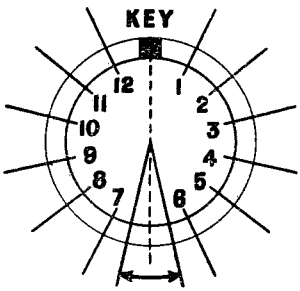
TYPICAL OPERATION

3rd Anode Voltage (volts)	V_{a3}	2,000	3,000	5,000	←
2nd Anode Voltage - approximate, for focus (volts)	V_{a2}	360	540	900	←
1st Anode Voltage (volts)	V_{a1}	2,000	2,000	2,000	←
Average Bias on Control Grid for Cut-off of Beam Current (volts)	V_g	- 60	-60	-60	←
Average Working Bias for 20μA Beam (volts)		- 47	-47	-47	←
Approximate Sensitivity of "X" Plates (mm/V)		0.21	0.14	0.084	←
Approximate Sensitivity of "Y" Plates (mm/V)		0.42	0.28	0.168	←

BASE 12 Contact Key Base (BS.448)

VIEW OF FREE END



PERMISSIBLE ANGULAR VARIATION OF MOUNTS ± 10°

CONNEXIONS

Pin 1	Control Grid	g
Pin 2	Cathode	k
Pin 3	Heater	h
Pin 4	Heater	h
Pin 5	Anode 1	a1
Pin 6	Anode 2	a2
Pin 7	Internal Coating	m
Pin 8	Deflecting Plate Y2	y2
Pin 9	Deflecting Plate X2	x2
Pin 10	Anode 3	a3
Pin 11	Deflecting Plate X1	x1
Pin 12	Deflecting Plate Y1	y1

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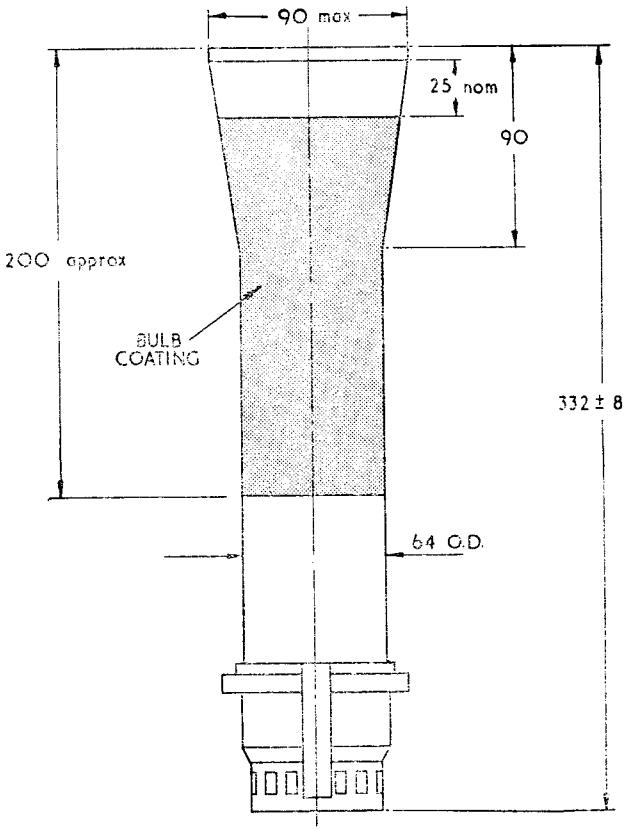

All dimensions in mm.

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