*DIGITRON—Long Life 10 Digit End-Viewing Cold Cathode Numerical Register Tube

GR10M

Characteristics and Recommended Operating Conditions

(at room temperature unless otherwise stated)

Minimum anode to cathode voltage to ensure breakdown (see Note 1)	170 V
Nominal running voltage at 2 mA	140 V
D.C. Operation—	
Recommended Cathode Current	2 mA
Minimum positive bias on non-conducting cathodes (See Note 2)	60 V
Half wave A.C. supply	
Recommended Cathode Current, average	1·5 mA
peak	7 mA
Minimum positive bias on non-conducting cathodes (See Note 2)	40 V
Life expectancy (2 mA cathode current) (See Note 3)	
Continuous ionisation of one cathode	> 5,000 hours
Sequentially switching cathodes every 100 hours or less	> 30,000 hours

Absolute Maximum Ratings

Cathode current (each digit)—	
Maximum average (averaging time = 20 mS)	2·5 mA
Maximum peak	10 mA
Minimum for D.C. operation	1·0 mA
Bulb temperature—	
Maximum	+ 70°C
Minimum (See Note 3)	— 50°C

Notes—

(1) At temperatures below 0°C anode supply should be at least 200 V.

(2) Under limit conditions some deterioration of the glow appearance may occur during life. To minimise this, the voltage between the conducting and non-conducting cathodes should be as high as possible.

(3) At —50°C the life expectancy of the tube is reduced.

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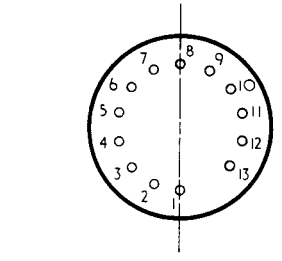
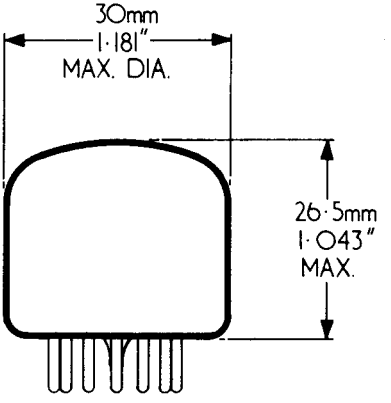
Mechanical Data

Mounting position	Any
Base	B13B
Socket	B13B

Base Connections
(underside view)

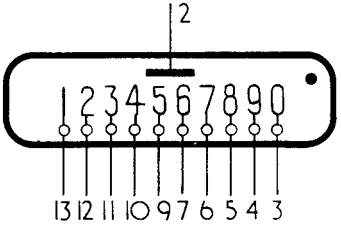


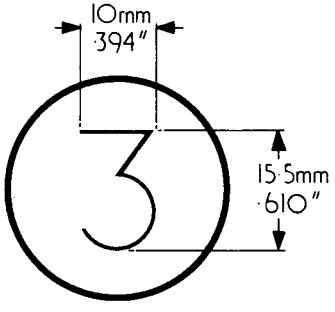


Pin	2	Anode
	3	Cathode 0
	4	Cathode 9
	5	Cathode 8
	6	Cathode 7
	7	Cathode 6
	9	Cathode 5
	10	Cathode 4
	11	Cathode 3
	12	Cathode 2
	13	Cathode 1

Note—All other pins are to be left unconnected

The dome of the tube is filter coated





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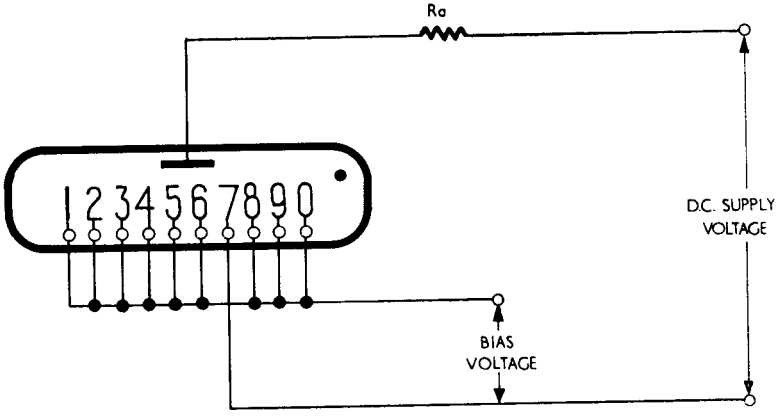
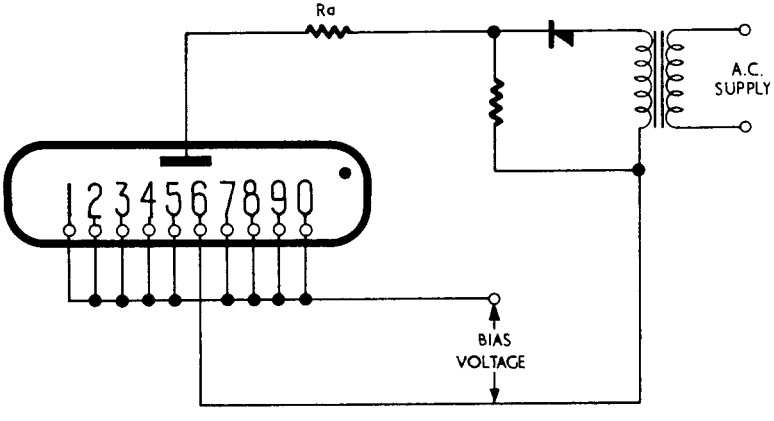


Typical Circuit for D.C. Operation



Typical Circuit for A.C. Operation

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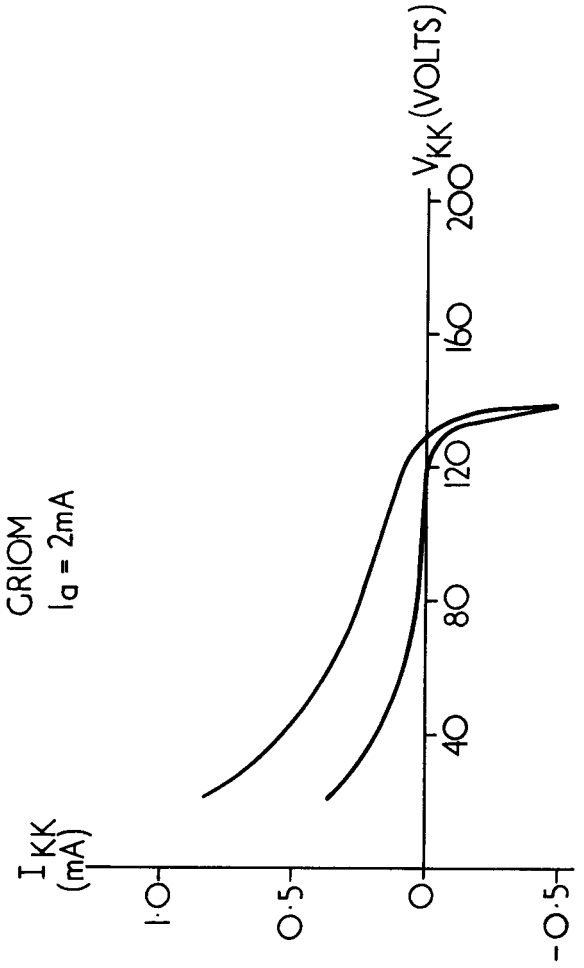

Sum of the Total Probe Current to all Non-Illuminating Cathodes Plotted against Cathode Bias Voltage.

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