

Dieter's Nixie Tube Data Archive

This file is a part of Dieter's Nixie- and display tubes data archive

If you have more datasheets, articles, books, pictures or other information about Nixie tubes or other display devices please let me know.

Thank you!

Document in this file	ETL datasheet: GR10M tube
Display devices in this document	GR10M

*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 peak	1.5 mA 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.

* Registered Trade Mark



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Cold Cathode Numerical Register Tube**

GR10M

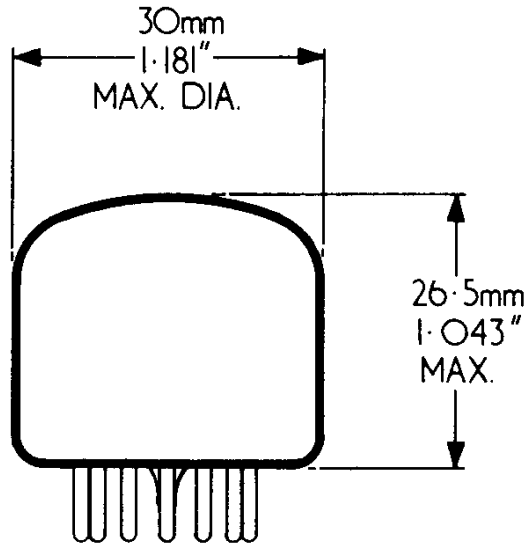
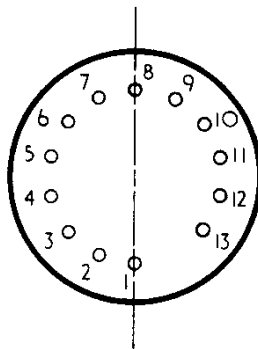
Mechanical Data

Mounting position
Base
Socket

Any
B13B
B13B

Base Connections
(underside view)

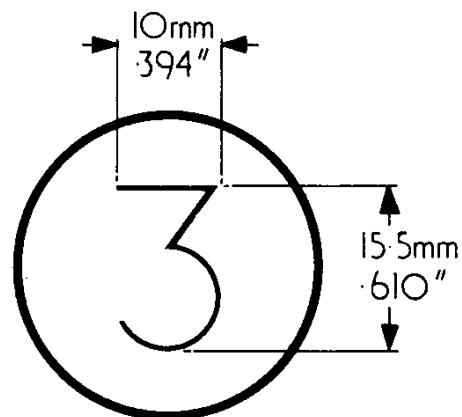
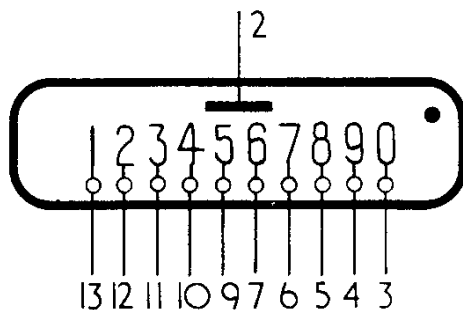
CENTRE LINE OF CHARACTERS



The dome of the tube
is filter coated

- 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

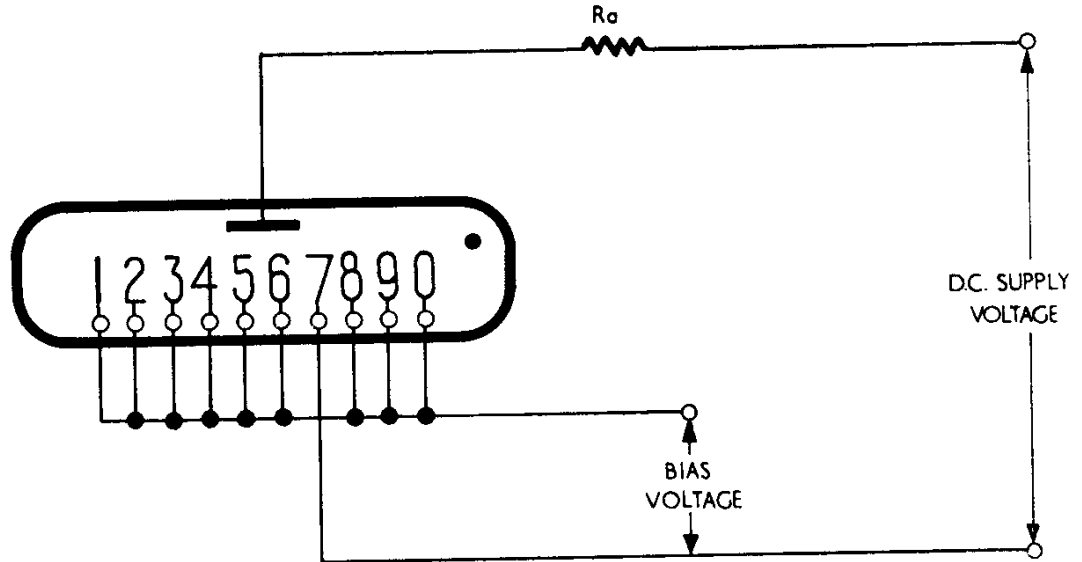


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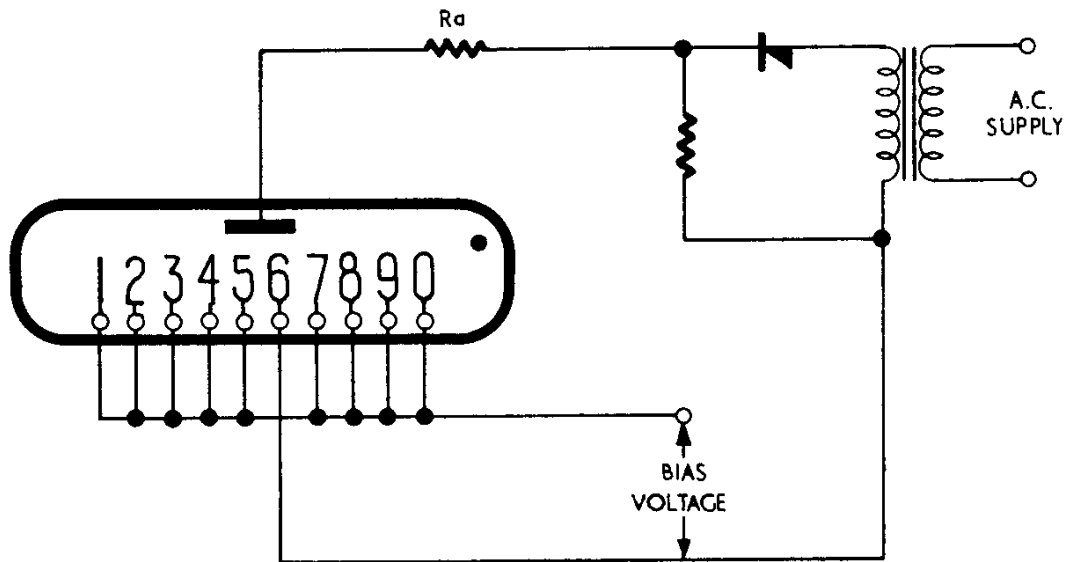


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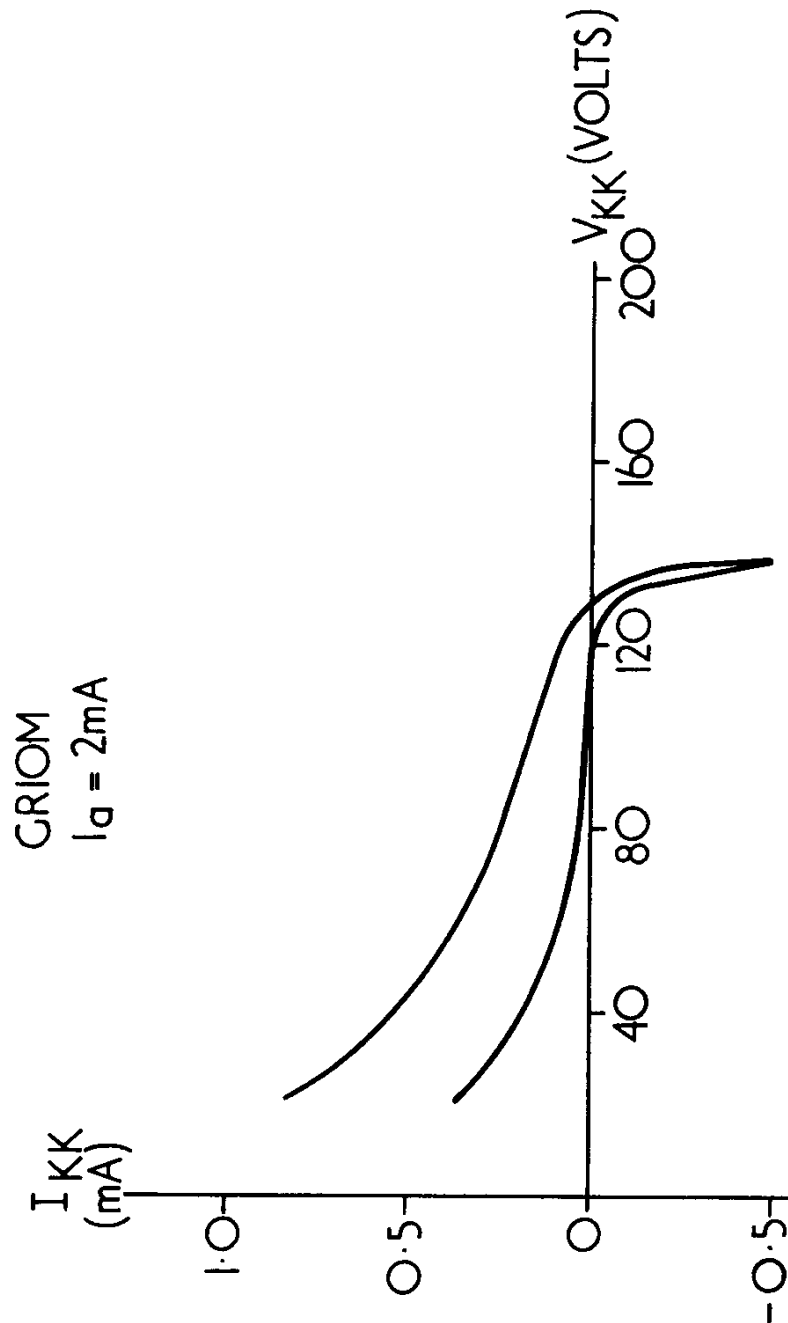
Typical Circuit for D.C. Operation



Typical Circuit for A.C. Operation

*Registered Trade Mark



GR10M***DIGITRON—Long Life 10 Digit End-Viewing
Cold-Cathode Numerical Register Tube**

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

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