Dieter’s

Nixie Tube Data Archive

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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	National Union - Datasheet for the “Inditron” GI-10 – Dated 1954-05
Display devices in this document	GI-10

File created by Dieter Waechter
www.tube-tester.com

N.U. ENGINEERING BULLETIN

ELECTRONIC COMPONENTS

N.U. INDITRON

TYPE GI-10

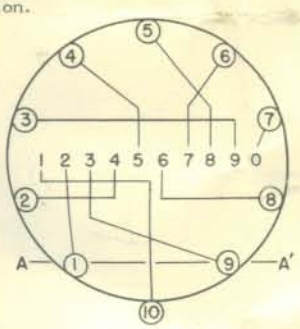
The function of this tube is to portray the digits 0--9, one at a time, in any selected order as controlled by an external switching circuit.

The selected numeral form appears as a brilliant, sharp cathode glow in the characteristic orange-red color of Neon gas discharges. The numeral forms are arranged in a stack on planes approximately 0.050 in. apart in order from 1 to 0 starting at the bottom. Ten input leads are used; one for each numeral. A system of shared parallel load resistors is required.

BASING

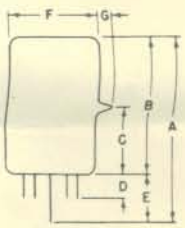
Any standard 9-pin miniature socket containing a center shield may be used, such as Amphenol 59-409. Pin No.10 makes contact to this center shield which is used as the socket connecting terminal.

The socket is oriented with respect to viewing position so that line A——A' intersecting the centers of pins No.1 and 9 is horizontal. This orients the numerals in the correct vertical position.



PHYSICAL CHARACTERISTICS

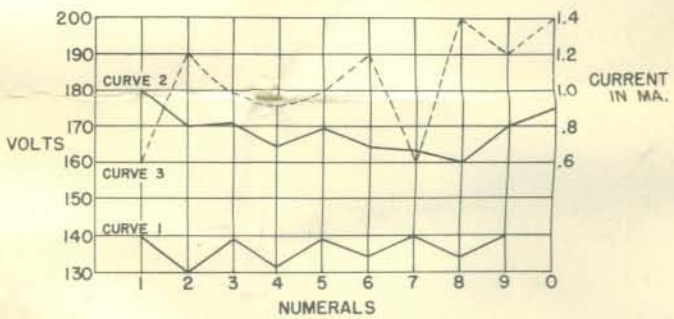
A:	Overall Height.....	2.05	±0.05 in.
B:	Bulb Height.....	1.50	±0.05 in.
C:	Tubulation Height..	0.75	±0.05 in.
D:	Pin Length.....	0.24	±0.02 in.
E:	Center Pin Length..	0.56	±0.02 in.
F:	Bulb Diameter.....	0.820	±0.02 in.
G:	Tubulation Length..	.175	±0.03 in.



ELECTRICAL CHARACTERISTICS

The ignition and operating voltages vary somewhat from digit to digit in the tube and depend somewhat on both the immediate and long-term operating history, however, the characteristics remain quite constant under all conditions.

The following curves depict typical operating characteristics. Specific values in other tubes may vary by a factor of ±10-15 percent.



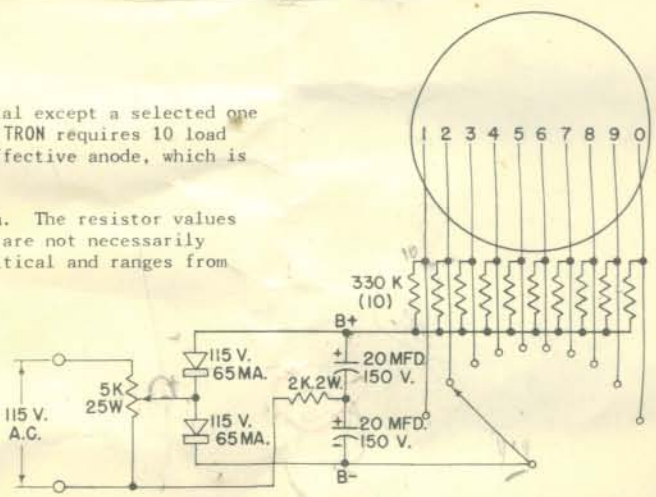
CURVE 1 - OPERATING VOLTAGE
CURVE 2 - BREAKDOWN VOLTAGE
CURVE 3 - OPERATING CURRENT

APPLICATION TO CIRCUITS

All of the characters in this tube must be held at anode potential except a selected one which is switched to ground by some external circuit. Each INDITRON requires 10 load resistors, nine of which are always parallel connected to the effective anode, which is the combined effect of the nine unswitched elements.

A recommended circuit for mechanical switching is given herewith. The resistor values are those used with satisfactory results in this laboratory but are not necessarily optimized. The applied DC voltage for best operation is not critical and ranges from 160 - 190 volts.

The current drawn in operation by the different digits is from 1 to 2 ma. If these values are exceeded the life of the tube will be materially shortened. The voltage supply should be adjusted until the largest number, the "0" or "8" is just covered with glow.



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