

NUMERICAL INDICATOR



engineering data report

7153

(BD-206) SUPER NIXIE*

The 7153 (BD-206) is a gas-filled, cold cathode, 10-digit ("0" through "9"), numerical indicator tube, having a common anode with a suppressor screen to minimize darkening of the viewing dome. This tube features a cup design providing a non-glare background. It is intended for use as a direct, in-line, readout device.

MECHANICAL DATA (SEE FIGURE 1)

Overall Length	1.625" Max.
Seated Height	1.325" Max.
Bulb Diameter	1.350" Max.
Envelope Connections	See Figure 2
Height of Numerals	.808" Nom.
Numerical Design (Human Engineering)	See Figure 3
Socket, 13-Pin (#HSK-106 or HSK-112)	See Figure 4
Weight	1.0 oz. Max.
Mounting Position	See Note 1
Cathode(s)	Glow Discharge
Shock	350 G's (30° Hammer)
Vibration	10 G's, 60 Cps.
Temperature	-65° C. through +70° C., Note 2
Altitude	70,000 Feet

ELECTRICAL DATA

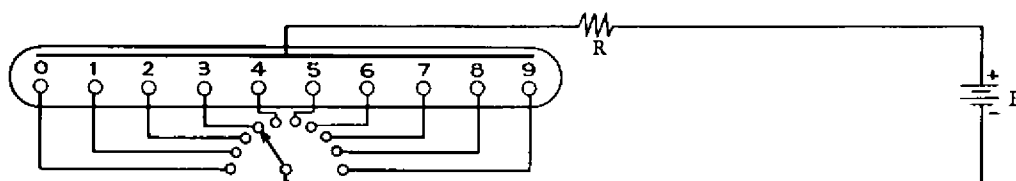
1. ABSOLUTE RATINGS:

Ionization Voltage	250 Vdc Minimum
Anode Current	
Peak	5.0 MA
Average	3.0 MA Max.
Individual Cathode Wattage	0.8 Watts Max.

2. TEST CONDITIONS: (See Typical Circuit)

Anode Supply Voltage	250 Vdc
Anode Series Resistor	43 K Ohms
Anode Current	2.0 MA Min. to 3.0 MA Max.

TYPICAL CIRCUIT

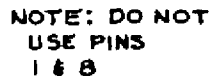


RECOMMENDED OPERATING CONDITIONS

E	R
250V	43K
300V	62K

NOTES

- (1) The tube socket is oriented with respect to the viewing position so that A — A', intersecting the center of Pins 1 and 8 is vertical with Pin 8 on top. This orients the numerals in the correct vertical position. The numbers are viewed through the top of the tube.
- (2) From +30° C. to +70° C., no significant change in cathode current occurs. From +30° C. to -65° C. an increase in cathode (Up to 50%) may be expected.
- (3) Recommend highest voltage available be selected with corresponding series resistor.



(REF. WADC TR 54-160 APPENDIX PAGE 102)

FIG. 3

