

# NL-840/8754, NL-841, NL-842, NL-843 & NL-848

## NUMERICAL READOUT TUBES

National Electronics Readout tubes **NL-840, NL-841, NL-842, NL-843** and **NL-848** are ultra-long life cold cathode numerical display tubes. The side view configuration, small height and light weight allow flexible imaginative packaging. A maximum envelope width of .750" allows less than .800" center to center spacing to make optimum use of panel spacing providing an attractive display.

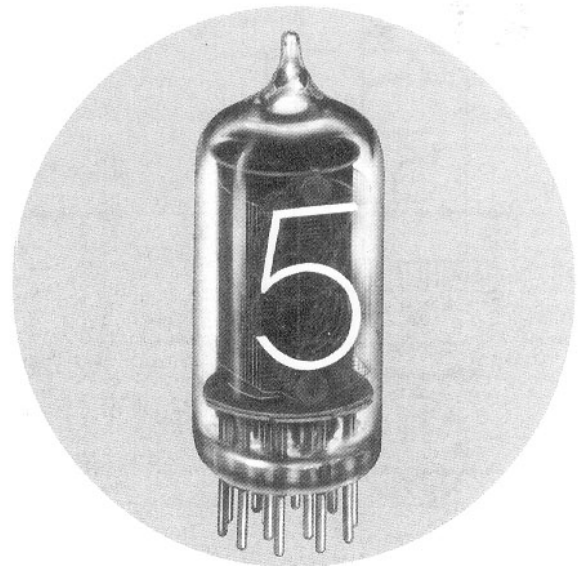
**NL-840** is a 10 character display tube, numerals 0 to 9.

**NL-841** is a 10 character display tube, numerals 0 to 9 with an independent decimal point to the left of the numerals.

**NL-842** is a 10 character display tube, numerals 0 to 9 with an independent decimal point to the right of the numerals.

**NL-843** is a 2 character display tube, symbols + and —.

**NL-848** is a 10 character display tube, numerals 0 to 9 with independent decimal points to the left and right of the numerals. Write for technical data.



### TECHNICAL INFORMATION

Ionization Voltage (Maximum) .....	170 Vdc
Supply Voltage (Minimum) .....	170 Vdc
Cathode Current	
Peak (Maximum) .....	3.5 ma
Average (Maximum) .....	3.0 mA
Average (Minimum) .....	1.5 mA
Decimal Point Current	
Average (Maximum) .....	0.5 mA
Average (Minimum) .....	0.2 mA
Prebias Limits .....	+50V to +120V dc
Temperature Limits .....	—20°C to +55°C
(Reduced Life) .....	—65°C to +85°C
Life (Dynamic) .....	200,000 Hours
Weight .....	0.3 oz.
Mounting Position .....	Vertical with pins 1 & 10 in front

### Recommended Operating Conditions:

#### NL-840 - NL-843

Supply Voltage (Ebb)	170Vdc	250Vdc	300Vdc
Anode Resistor (Rp)	8.2K $\Omega$	43K $\Omega$	62K $\Omega$

#### NL-841 - NL-842

(a) When the decimal point is to be operated only while another character is on:			
Supply Voltage (Ebb)	170Vdc	250Vdc	300Vdc
Anode Resistor (Rp)	8.2K $\Omega$	35K $\Omega$	52K $\Omega$
(b) When the decimal point is to be operated with or without another character it is recommended individual cathode resistors be used with no resistor in the anode circuit.			
Supply Voltage (Ebb)	170Vdc	250Vdc	300Vdc
Numeral Resistor (Rk)	10K $\Omega$	43K $\Omega$	62K $\Omega$
Decimal Point Resistor (Rd)	72K $\Omega$	330K $\Omega$	500K $\Omega$

Note: Use of the highest voltage available with the appropriate resistor is recommended.

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