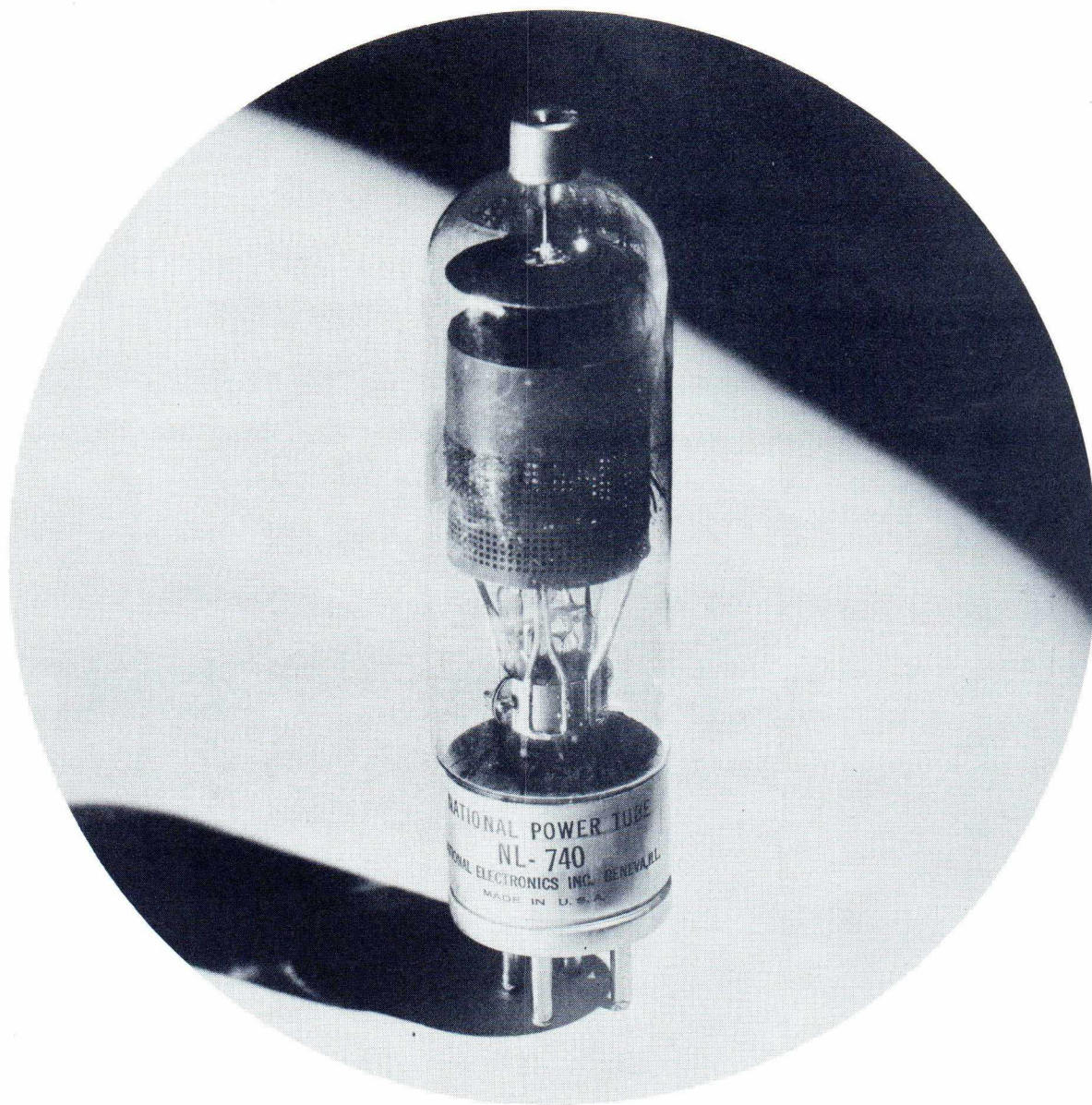


# THYRATRON TUBES

NL-740 & NL-741

4 Amperes dc — 50 Amperes Peak



NATIONAL POWER TUBE NL-740 is a quick heating Industrial thyatron designed especially for heavy duty ignitor firing applications and for use in motor speed control and regulated rectifier equipments. It is gas and mercury filled for quick starting and constancy of characteristics within wide temperature limits.

NL-741 has the same general characteristics, within its narrower temperature limits, but is filled with mercury only to permit use of the tube at higher voltages.

Both types are available with bracket type bases for panel mounting under type numbers NL-740P and NL-741P.

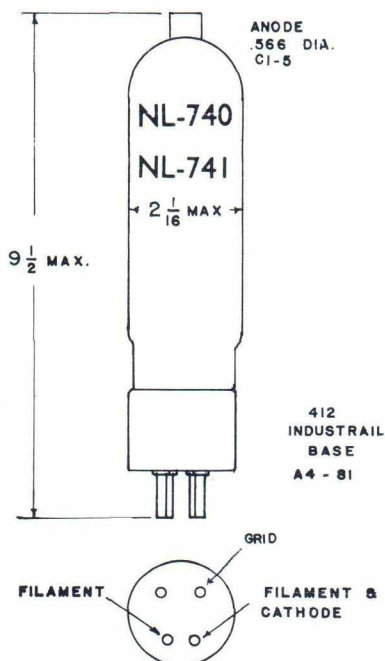
**NATIONAL ELECTRONICS, INC.**  
GENEVA, ILLINOIS, U. S. A.

# NL-740 & NL-741 THYRATRON TUBES

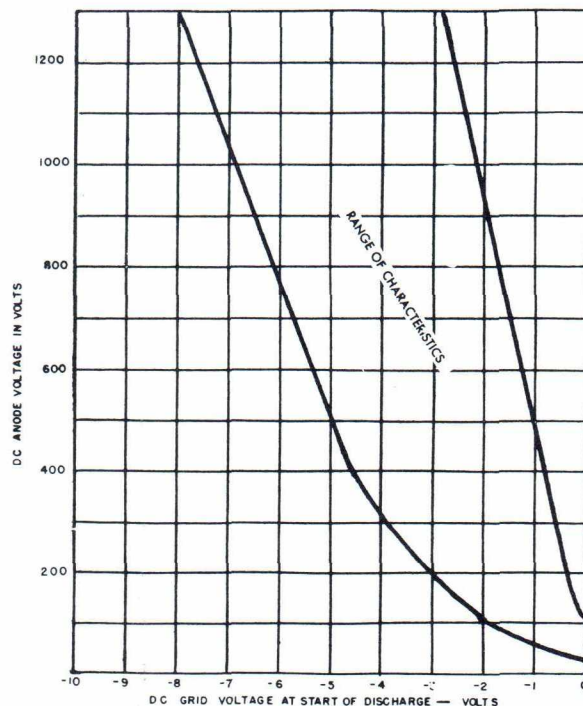
## TECHNICAL INFORMATION

|                                                            | NL-740     |            | NL-741              |            |            |
|------------------------------------------------------------|------------|------------|---------------------|------------|------------|
| dc Amperes output (maximum)                                | 4.0        | 2.5        | 4.0                 | 2.5        | 2.5        |
| Instantaneous Amperes output (maximum)                     | 30         | 50         | 30                  | 50         | 15         |
| Maximum time of averaging<br>anode current (seconds)       | 5          | 5          | 5                   | 5          | 5          |
| Maximum peak inverse volts                                 | 1500       | 1500       | 1500                | 1500       | 5000       |
| Maximum peak forward volts                                 | 1500       | 1500       | 1500                | 1500       | 2500       |
| Condensed mercury temperature limits (°C)                  | -40 to +80 | -40 to +80 | +40 to +90          | +40 to +90 | +40 to +65 |
| Filament volts                                             |            |            | 2.5                 |            |            |
| Filament amperes                                           |            |            | 16 $\frac{1}{2}$    |            |            |
| Heating time (seconds)                                     |            |            | 30                  |            |            |
| Typical arc drop at 12 amperes peak (volts)                |            |            | 12                  |            |            |
| Grid control characteristic                                |            |            | See Curve           |            |            |
| Maximum negative grid voltage<br>before conduction (volts) |            |            | 500                 |            |            |
| Maximum negative grid voltage<br>during conduction (volts) |            |            | 10                  |            |            |
| Maximum critical grid current (microamps)                  |            |            | 10                  |            |            |
| Ionization time (approx., microseconds)                    |            |            | 10                  |            |            |
| Deionization time (approx., microseconds)                  |            |            | 1000                |            |            |
| Anode to grid capacitance (uuf)                            |            |            | 3                   |            |            |
| Maximum ac short circuit current (amperes)                 |            |            | 400                 |            |            |
| Approx. temp. rise, cond. mercury<br>above ambient (°C)    |            |            | 25                  |            |            |
| Mounting position                                          |            |            | Vertical, base down |            |            |
| Net weight (ounces)                                        |            |            | 7                   |            |            |
| Approx. shipping weight (lbs.)                             |            |            | 4                   |            |            |

### OUTLINE DRAWING

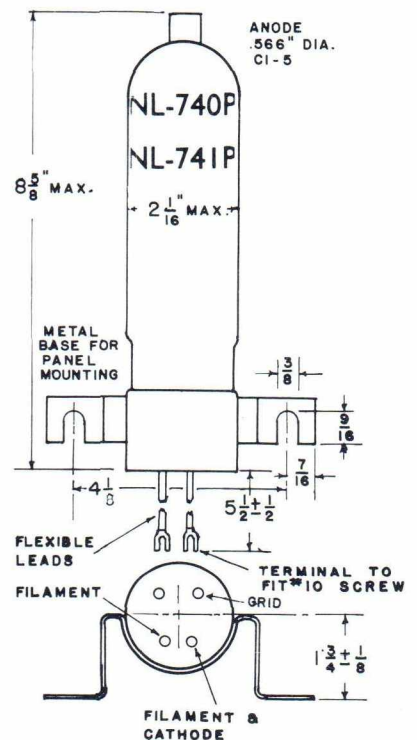


### GRID CHARACTERISTIC



RETURNS TO FILAMENT CENTER TAP

### OUTLINE DRAWING



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