ELECTRONIC TUBE REFERENCE

# NL761

Specialized - Thyratron electronic tube

CONSOLIDATED TECHNICAL DATA
**1 SECTION**
CONSTRUCTION
**THYRATRON**

Quick-heating industrial gas-and-mercury thyratron for welding, motor-speed control, and regulated rectifier applications.

## General characteristics

| | | | |
|---|---|---|---|
| **BASE DESIGNATION** | DOWN | **BASE PINS** | — |
| **NOMINAL HEATER** | 2.5 V / 21 A | **PARALLEL HEATER** | — / — |
| **HEATING** | Direct | **SERIES OPERATION** | Not specified |
| **CATHODE ARRANGEMENT** | Separate cathodes | **SECTION CONSTRUCTION** | Similar |

## Section ratings

| SECTION1 Thyratron | |
|---|---|
| **MAXIMUM PLATE VOLTAGE** | 1500 V |
| **MAXIMUM CATHODE CURRENT** | 6.4 A |

*Published ratings and characteristics promoted where canonical fields apply.*

NATIONAL POWER TUBE NL-760 is a quick heating industrial thyratron designed especially for weld- ing control, motor speed control, and regulated rectifier applications. It is gas and mercury filled for quick starting, constancy of characteristics within wide temperature limits, and long life. NL-761 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 mo

SOURCE OPERATING CONDITIONS

SOURCE PDF

# 1956 National Electronics Industrial Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1956 NATIONAL ELECTRONICS INDUSTRIAL TUBES

## Section 1 · Thyratron

| OTHER | | |
|---|---|---|
| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
| NL-760 & | **NL-761** | Source technical-information table; wording preserved from datasheet. |
| 6.4 Amperes do | **77 Amperes Peak A** | Source technical-information table; wording preserved from datasheet. |
| NL-760 | **NL-761** | Source technical-information table; wording preserved from datasheet. |
| do Amperes output (Maximum) | **6.4 \| 6.4 \| 4.0 A** | Source technical-information table; wording preserved from datasheet. |
| Instantaneous Amperes Output (Maximum) | **77 \| 77 \| 30 A** | Source technical-information table; wording preserved from datasheet. |
| Maximum time of averaging anode current (seconds) | **15 \| 15 \| 15 A** | Source technical-information table; wording preserved from datasheet. |
| Maximum peak inverse volts | **1500 \| 1500 \| 5000 V** | Source technical-information table; wording preserved from datasheet. |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Maximum peak forward volts | **1500 \| 1500 \| 2500 V** | Source technical-information table; wording preserved from datasheet. |
| Condensed mercury temperature limits (°C) | **−40 to +80* \| +40 to +90 \| +40 to +65 C** | Source technical-information table; wording preserved from datasheet. |
| Filament volts | **2.5 V** | Source technical-information table; wording preserved from datasheet. |
| Filament amperes | **21 ± 2 A** | Source technical-information table; wording preserved from datasheet. |
| Filament heating time (seconds) | **60 \| GRID CHARACTERISTIC s** | Source technical-information table; wording preserved from datasheet. |
| Maximum negative grid voltage before conduction (volts) | **500 V** | Source technical-information table; wording preserved from datasheet. |
| Maximum negative grid voltage during conduction (volts) | **10 V** | Source technical-information table; wording preserved from datasheet. |
| Maximum critical grid current (mcroamps) | **10 A** | Source technical-information table; wording preserved from datasheet. |
| Maximum ac short circuit current (amperes) | **770 A** | Source technical-information table; wording preserved from datasheet. |
| Approx. temp. rise, cond. mercury above ambient (°C) | **30** | Source technical-information table; wording preserved from datasheet. |
| Net weight (ounces) | **9 oz** | Source technical-information table; wording preserved from datasheet. |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Approx. shipping weight (lbs.) | **5 lb** | Source technical-information table; wording preserved from datasheet. |
| between —40 and | **+80°C. For maximum life the condensed mer-** | Source technical-information table; wording preserved from datasheet. |
| cury temperature after warm-up should run between | **+40 and C** | Source technical-information table; wording preserved from datasheet. |
| +80°C which corresponds to approximately | **+10 to +50°C ambient** | Source technical-information table; wording preserved from datasheet. |
| 0.566'DIAM | **CAP CI-5 \| .66! DIA. CAP** | Source technical-information table; wording preserved from datasheet. |
| CAP CI | **-5 ANODE ~ CI —S** | Source technical-information table; wording preserved from datasheet. |
| NL-760P | **NL-76 0L** | Source technical-information table; wording preserved from datasheet. |
| NL-760 | **e G7 . NL-761 L** | Source technical-information table; wording preserved from datasheet. |
| NL-76I | **NL-761P \| MAX** | Source technical-information table; wording preserved from datasheet. |
| 8: MAX | **• \| 2 fI** | Source technical-information table; wording preserved from datasheet. |
| ~— INDUSTRIAL | **!1** | Source technical-information table; wording preserved from datasheet. |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Printed in U.S.A | **12%56 G.R.** | Source technical-information table; wording preserved from datasheet. |

| CHARACTERISTIC | | |
|---|---|---|
| **PARAMETER** | **PUBLISHED VALUE** | **CONDITION / NOTE** |
| Typical arc drop at 20 amperes peak (volts) | **12 V** | Source technical-information table; wording preserved from datasheet. |
| Ionization time (approx., microseconds) | **10 \| 4 us** | Source technical-information table; wording preserved from datasheet. |
| Deionization time (approx., microseconds) | **1000 \| s us** | Source technical-information table; wording preserved from datasheet. |
| Anode to grid capacitance (uuf) | **4 pF** | Source technical-information table; wording preserved from datasheet. |


Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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