

ELECTRONIC TUBE REFERENCE

NL760

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Quick-heating industrial gas-and-mercury thyatron for welding control, motor-speed control, and regulated rectifiers. Its massive cathode supports heavy switching.

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 Triode	
MAXIMUM PLATE VOLTAGE	1500 V
MAXIMUM CATHODE CURRENT	6.4 A
PEAK INVERSE VOLTAGE	1500 V
NOMINAL OUTPUT CURRENT	6.4 A
PEAK FORWARD CURRENT	77 A
WARM-UP TIME	60 s
Published ratings and characteristics promoted where canonical fields apply.	

NATIONAL POWER TUBE NL-760 is a quick heating industrial thyatron 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

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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 · Triode

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.



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1957 National Electronics

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1957 NATIONAL ELECTRONICS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak forward voltage	1500 V	—
Maximum peak output current	77 A	—
Maximum dc output current	6.4 A	—

TUBE TINKER

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