



ELECTRONIC TUBE REFERENCE

NL740

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Quick-heating industrial gas-and-mercury thyatron for heavy ignitor firing, motor-speed control, and regulated rectifier equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	DOWN	BASE PINS	—
NOMINAL HEATER	2.5 V / 16 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	1500 V
MAXIMUM CATHODE CURRENT	4 A
PEAK INVERSE VOLTAGE	1500 V
NOMINAL OUTPUT CURRENT	4 A
PEAK FORWARD CURRENT	50 A
WARM-UP TIME	30 s
<i>Published ratings and characteristics promoted where canonical fields apply.</i>	

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

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
4 Amperes do	50 Amperes Peak A	Source technical-information table; wording preserved from datasheet.
NL-740	NL-741	Source technical-information table; wording preserved from datasheet.
do Amperes output (maximum)	4.0 2.5 4.0 2.5 2.5 A	Source technical-information table; wording preserved from datasheet.
Instantaneous Amperes output (maximum)	30 50 30 50 15 A	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
anode current (seconds)	_ 5 5 5 5 5 A	Source technical-information table; wording preserved from datasheet.
Maximum peak inverse volts	1500 1500 1500 1500 5000 V	Source technical-information table; wording preserved from datasheet.
Maximum peak forward volts	_ 1500 1500 1500 1500 2500 V	Source technical-information table; wording preserved from datasheet.
Condensed mercury temperature limits (°C)	-40 to #80 -40 to+80 +40 to +90 +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	16t 2 A	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heating time (seconds)	30 s	Source technical-information table; wording preserved from datasheet.
before conduction (volts)	500 V	Source technical-information table; wording preserved from datasheet.
during conduction (volts)	10 V	Source technical-information table; wording preserved from datasheet.
Maximum critical grid current (microamps)	10 A	Source technical-information table; wording preserved from datasheet.
Maximum ac short circuit current (amperes)	400 A	Source technical-information table; wording preserved from datasheet.
above ambient (°C)	25	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Net weight (ounces)	__ 7 oz	Source technical-information table; wording preserved from datasheet.
Approx. shipping weight (Ibs.)	_ 4 lb	Source technical-information table; wording preserved from datasheet.
566 DIA	.566" CIA.	Source technical-information table; wording preserved from datasheet.
CI-5	CI -5	Source technical-information table; wording preserved from datasheet.
NL-741	NL-741P	Source technical-information table; wording preserved from datasheet.
MAX+	1000	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID	FLEX18 LE	Source technical-information table; wording preserved from datasheet.
RETURNS TO FILAMENT CENTER TAP	Litho II [^] .r6	Source technical-information table; wording preserved from datasheet.

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical arc drop at 12 amperes peak (volts)	12 V	Source technical-information table; wording preserved from datasheet.
Ionization time (approx., microseconds)	10 us	Source technical-information table; wording preserved from datasheet.
Deionization time (approx., microseconds)	1000 us	Source technical-information table; wording preserved from datasheet.
Anode to grid capacitance (uuf)	3 pF	Source technical-information table; wording preserved from datasheet.


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1957 National Electronics

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

1957 NATIONAL ELECTRONICS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak forward voltage	1500 V	—
Maximum peak output current	50 A	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum dc output current	4 A	—

TUBE TINKER

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

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