



ELECTRONIC TUBE REFERENCE

NL649

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

RECTIFIER

Single-ended mercury-filled industrial rectifier for power supplies and back-rectifier service with thyratrons. Rated for approximately 900 V peak inverse voltage and 2 A nominal output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	DOWN	BASE PINS	—
NOMINAL HEATER	2.5 V / 7 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
MAXIMUM CATHODE CURRENT	2 A
PEAK INVERSE VOLTAGE	900 V
NOMINAL OUTPUT CURRENT	2 A
PEAK FORWARD CURRENT	10 A
FORWARD VOLTAGE DROP	9 V
WARM-UP TIME	20 s
<i>Published ratings and characteristics promoted where canonical fields apply.</i>	

NATIONAL POWER TUBE NL-649 is a sturdy, single-ended, rectifier tube designed especially for industrial power rectifier applications and for "back-rectifier" applications in conjunction with a thyatron tube. It is mercury filled for efficiency, long life, and the ability to stand high inverse voltage. NATIONAL ELECTRONICS, INC. GENEVA, ILLINOIS, U. S A. NL-649 RECTIFIER TUBE TECHNICAL INFORMATION
do Amperes output (maximum) 2 Instantaneous Amperes output (maximum) 10 Maximum time of averaging anode current (seconds) 5 Maximum peak inverse volts 900 Fi

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 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
do Amperes output (maximum)	2 A	Source technical-information table; wording preserved from datasheet.
Instantaneous Amperes output (maximum)	10 A	Source technical-information table; wording preserved from datasheet.
Maximum time of averaging anode current (seconds)	5 A	Source technical-information table; wording preserved from datasheet.
Maximum peak inverse volts	900 V	Source technical-information table; wording preserved from datasheet.
Filament volts	2,5 V	Source technical-information table; wording preserved from datasheet.
Filament amperes	7 +1 A	Source technical-information table; wording preserved from datasheet.
Filament heating time (seconds)	20 s	Source technical-information table; wording preserved from datasheet.
Maximum ac short circuit current (amperes)	125 A	Source technical-information table; wording preserved from datasheet.
Condensed mercury temperature limits (°C)	+ 35 to + 85 C	Source technical-information table; wording preserved from datasheet.
Approximate temperature rise, cond. mercury above ambient (°C)	25 C	Source technical-information table; wording preserved from datasheet.
Net weight (ounces)	3 oz	Source technical-information table; wording preserved from datasheet.
Approx. shipping weight (lbs.)	3 lb	Source technical-information table; wording preserved from datasheet.
5,bMAX	M E D. 4 -PIN	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Printed in USA	5-56 GE	Source technical-information table; wording preserved from datasheet.

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical arc drop at	6 amperes peak (volts) g	Source technical-information table; wording preserved from datasheet.
Typical Anode starting voltage (volts)	16 V	Source technical-information table; wording preserved from datasheet.



SOURCE OPERATING CONDITIONS

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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 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC output current	2 A	—
Maximum instantaneous output current	10 A	—
Maximum peak inverse voltage	900 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	20 s	—
Typical arc drop	9 V	—
Typical anode starting voltage	16 V	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filling	Mercury vapor	—



TUBE TINKER

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and their source documents.

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