



ELECTRONIC TUBE REFERENCE

NL5665

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Compact quick-heating xenon thyatron designed for motor-speed and welding-control applications, combining high-current capability with wide-temperature industrial operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2.5 V / 31 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	1000 V
MAXIMUM CATHODE CURRENT	18 A
PEAK INVERSE VOLTAGE	1250 V
NOMINAL OUTPUT CURRENT	18 A
PEAK FORWARD CURRENT	160 A
WARM-UP TIME	60 s
Thyatron section; published switching/rating data retained below.	

National Power Tube NL-5665/C16J is a compact, quick heating thyatron designed for motor speed control and welding control applications. It is xenon filled for quick starting and the ability to operate within very wide temperature limits. TECHNICAL INFORMATION do Amperes output (Maximum) 18 16 Instantaneous amperes output (Maximum) 100 160 Maximum time of averaging anode current (seconds) 4.5 Maximum peak inverse volts 1250 Maximum peak forward volts 1000 Max. commutation factor (V

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
18 Amperes do	160 Ampere peak A	Source technical-information table; wording preserved from datasheet.
do Amperes output (Maximum)	18 16 A	Source technical-information table; wording preserved from datasheet.
Instantaneous amperes output (Maximum)	100 160 A	Source technical-information table; wording preserved from datasheet.
Maximum time of averaging anode current (seconds)	4.5 A	Source technical-information table; wording preserved from datasheet.
Maximum peak inverse volts	1250 V	Source technical-information table; wording preserved from datasheet.
Maximum peak forward volts	1000 V	Source technical-information table; wording preserved from datasheet.
Max. commutation factor (V/usec. x A/usec.) at max. initial inverse voltage of 330 volts	0.66 V	Source technical-information table; wording preserved from datasheet.
Filament volts	2.5 V	Source technical-information table; wording preserved from datasheet.
Filament amperes	31 ± 3 A	Source technical-information table; wording preserved from datasheet.
Filament heating time (seconds)	60 s	Source technical-information table; wording preserved from datasheet.
Maximum negative grid voltage before conduction (volts)	100 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.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum critical grid current (microamps)	10 A	Source technical-information table; wording preserved from datasheet.
Maximum ac short circuit current (amperes)	1000 A	Source technical-information table; wording preserved from datasheet.
Ambient temperature limits (°C)	-55 to +75 C	Source technical-information table; wording preserved from datasheet.
Net weight (ounces)	32 oz	Source technical-information table; wording preserved from datasheet.
Approx. shipping weight (lbs.)	31A lb	Source technical-information table; wording preserved from datasheet.
ANODE	w 4-	Source technical-information table; wording preserved from datasheet.
PERCET DUTY	2 TUBES CONNECTED	Source technical-information table; wording preserved from datasheet.

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical arc drop at 50 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) (approx.)	8 pF	Source technical-information table; wording preserved from datasheet.



TUBE TINKER
ELECTRON TUBE DATABASE

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	1000 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak output current	160 A	—
Maximum dc output current	18 A	—