



ELECTRONIC TUBE REFERENCE

ZM103101

Nixie electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

NIXIE

Red-filtered gas-filled cold-cathode Nixie symbol indicator displaying plus, minus, and equals signs in measuring and counting instruments.

GENERAL CHARACTERISTICS

BASE DESIGNATION	Noval	BASE PINS	9
NOMINAL HEATER	– / –	PARALLEL HEATER	– / –
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Nixie	
MAXIMUM PLATE VOLTAGE	170 V
MAXIMUM CATHODE CURRENT	3 mA
MINIMUM REGULATOR CURRENT	2 A
MAXIMUM REGULATOR CURRENT	4 A
STARTING VOLTAGE	170 V
MAINTAINING VOLTAGE	140 V
<i>Single indicator/counting section. Nixie-specific electrical ratings and operating data are retained in TUBE_SECTION_PARAMETER.</i>	

Gas-filled cold-cathode Nixie symbol indicator for direct display of +, – and = in measuring and counting instruments. ZM103101 is the red-filtered version.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1969 Nixie Valvo

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

1969 NIXIE VALVO

Section 1 · Nixie

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ignition voltage	170 V	Typical
Burning voltage	140 V	At 3 mA
Extinction voltage	110 V	Typical
Dynamic resistance	4.5 kOhm	Published
Symbol set	+ - =	Direct glow symbols

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	2–4 mA	Absolute range
Peak anode current	—10 mA	Absolute maximum
Envelope temperature	-55–70 degC	Absolute range



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

196X Nixie Random Datasheets

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

196X NIXIE RANDOM DATASHEETS

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Character/Numeral Height	15 mm	Published datasheet value
Ignition Voltage Maximum	170 V	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode/Anode Current Maximum	3 mA	Published datasheet value

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Supply Voltage Minimum	170 V	Published datasheet value
Maintaining Voltage	140 V	Published datasheet value



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1977 Nixie Tesla

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

1977 NIXIE TESLA

Section 1 · Nixie

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ignition voltage	170 V	Typical
Burning voltage	140 V	At 3 mA
Extinction voltage	110 V	Typical
Dynamic resistance	4.5 kΩ	Published
Symbol set	+ - =	Direct glow symbols

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	2–4 mA	Absolute range
Peak anode current	—10 mA	Absolute maximum
Envelope temperature	-55–70 degC	Absolute range

TUBE TINKER

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

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker