



ELECTRONIC TUBE REFERENCE

8421

Nixie electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

NIXIE

Cold-cathode Nixie indicator cross-referenced to RFT Z560M, intended for direct numerical or character display in electronic equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	13-17 TGL 68-87	BASE PINS	–
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 CATHODE CURRENT	3.5 mA
STARTING VOLTAGE	145 V
MAINTAINING VOLTAGE	135 V
<i>Special-purpose display/switching section. Published non-promoted ratings are retained in TUBE_SECTION_PARAMETER.</i>	

8421 is a cold-cathode numeric or character indicator tube listed in the supplied German comparison catalog as comparable to RFT type Z560M. The catalog provides electrical and mechanical data for that RFT type, including anode striking, maintaining, and operating limits. The source cautions that comparable types are not necessarily electrically identical, so the mapped RFT values are retained as comparison data rather than asserted as exact original-manufacturer ratings.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Burroughs

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

1963 BURROUGHS

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization Voltage	170 V	—
Supply Voltage	170 V	—
Cathode Current	3.5 mA	—
Typical Supply Voltage	170 V	—
Series Resistance	10000 ohm	—
Cathode Current Minimum	1.5 mA	—
Cathode Current Maximum	3 mA	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 Nixie RFT

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

1971 NIXIE RFT

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Comparable RFT Type	Z560M	Catalog cross-reference; comparable types are not guaranteed identical
Minimum Operating Supply Voltage	170 V	Published for comparable RFT type Z560M
Cathode Current Minimum	1 mA	Published for comparable RFT type Z560M
Cathode Current Maximum	2.5 mA	Published for comparable RFT type Z560M

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Cathode Current	10 mA	Published for comparable RFT type Z560M
Ambient Temperature Minimum	-50 °C	Published for comparable RFT type Z560M
Ambient Temperature Maximum	70 °C	Published for comparable RFT type Z560M
Symbol Height	15.5 mm	Published for comparable RFT type Z560M
Maximum Viewing Distance	10 m	Published for comparable RFT type Z560M
Maximum Bulb Height	26.5 mm	Published for comparable RFT type Z560M
Maximum Bulb Diameter	30.1 mm	Published for comparable RFT type Z560M

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Striking Voltage	145 V	Published for comparable RFT type Z560M
Anode Maintaining Voltage	135 V	Published for comparable RFT type Z560M
Anode Extinction Voltage	120 V	Published for comparable RFT type Z560M