



Subminiature vacuum fluorescent digital indicator triode with  
 direct heating cathode  
 According to 3 031 004 TU

Electrical Data	Values
Filament Voltage, V . . . . .	1
Filament Current, mA . . . . .	50
Static Mode	
Anode Segment Voltage, V . . . . .	25
Grid Voltage, V . . . . .	25
Anode Segment Current, total maximum, mA . . . . .	1,8
Maximum Grid Current, mA . . . . .	10
Pulse Mode	
Anode Segment Voltage, V . . . . .	50
Grid Voltage, V . . . . .	50
Brightness, cd/m <sup>2</sup> . . . . .	650
Guaranteed Minimum Operating Time, hours . . . . .	15000
Shelf Life - 4 years	
Glow Color - Green	
Absolute Maximum Values for Guaranteed Operation	
Filament Voltage, V, minimum . . . . .	0,85
maximum . . . . .	1,15
Static Mode	
Maximum Anode Segment Voltage, V . . . . .	30
Maximum Grid Voltage, V . . . . .	30
Max. Current of One Anode Segment @ V <sub>anode</sub> =V <sub>grid</sub> =30V, mA . . . . .	0,5
Max. Grid Current @ V <sub>anode</sub> =V <sub>grid</sub> =30V, mA . . . . .	15

### Pulse Mode

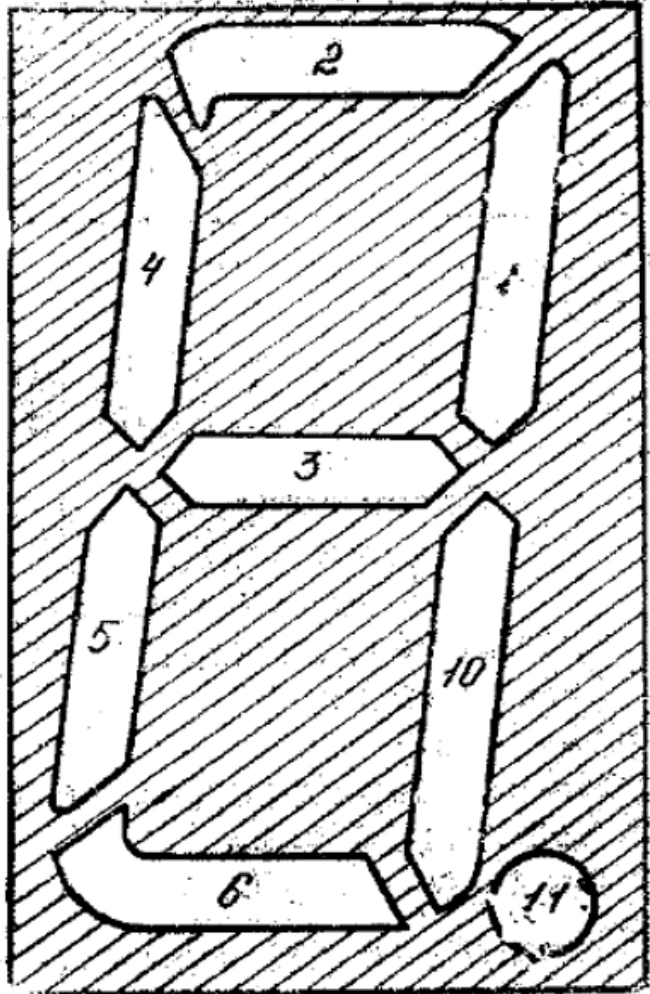
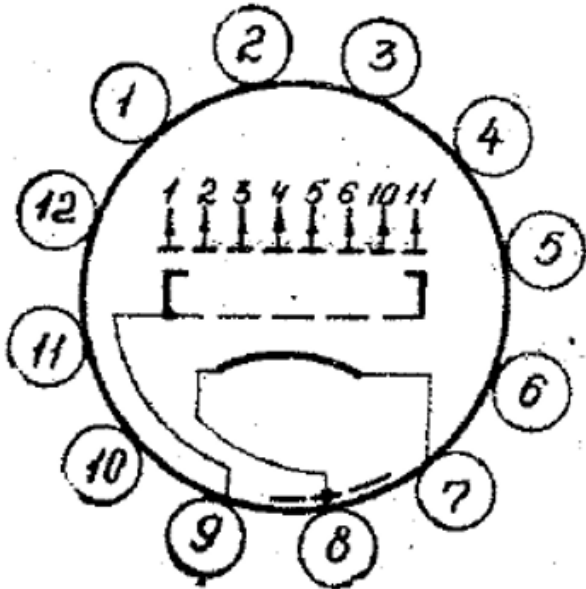
Maximum Anode Segment Voltage, V	. . . . .	70
Maximum Grid Voltage, V	. . . . .	70
Max. Current of One Anode Segment @ $V_{au}=V_{gu}=70V$ , mA	. . . . .	2
Max. Grid Current @ $V_{au}=V_{gu}=70V$ , mA	. . . . .	45
Minimum Duty Cycle	. . . . .	$\left(\frac{V_u^*}{20}\right)^{\frac{5}{2}}$
Ambient Temperature, °C, minimum	. . . . .	-60
maximum	. . . . .	+70

\*  $V_u$  is the amplitude of the grid voltage pulse (and anode segments)

### Notes:

1. During operation of the indicator, the values must not go beyond the specified maximum permissible values of the selected operating mode. Failure to do this can lead to failure of the indicator.
2. Operation at two or more maximum values of the selected operating mode is not permitted (except for the maximum allowed anode and grid voltages).
3. When calculating the values of the circuit, assume a load factor equal to 1.
4. Operation of the indicator is allowed at  $V_{filament}= 1,2V$  with a reduced guaranteed operating time of 3000 hours.

Connection Diagram  
of the Electrodes with leads



Lead Number	Electrode Name
1, 2, 3, 4, 5, 6, 10, 11	Anode Segments
9	Grid
7	Cathode
8	Cathode, conductive layer of the inner surface of the indicator
12	Non-Connected

Lead Number	Displayed Digit
1, 2, 4, 5, 6, 10	0
1, 10	1
1, 2, 3, 5, 6	2
1, 2, 3, 6, 10	3
1, 3, 4, 10	4
2, 3, 4, 6, 10	5
2, 3, 4, 5, 6, 10	6
1, 2, 10	7
1, 2, 3, 4, 5, 6, 10	8
1, 2, 3, 4, 6, 10	9
11	Dot

Notes:

1. Pin numbering is referred to the bottom view of the indicator
2. The number of the Anode Segment corresponds to the number of the pin
3. The reference point ("key") is the skipped or trimmed pin 12

Design data:

Maximum indicator height (without leads) - 42,5mm

Maximum indicator diameter - 13mm

Maximum indicator weight - 11g

Original datasheet provided by Dieter Waechter (aka The Tube Tester)  
at [Dieter's Nixie Tube Data Archive](#)

Translated by 64bittz

If you have some corrections or suggestions, contact the site owner

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