

# Dieter's Nixie Tube Data Archive

This file is a part of Dieter's Nixie- and display tubes data archive

If you have more datasheets, articles, books, pictures or other information about Nixie tubes or other display devices please let me know.

Thank you!

Document in this file	ETL datasheet: GC10D (CV5143) tube
Display devices in this document	GC10D, CV5143

# Scale-of-ten Counter Tube For Single-pulse Operation

**GC 10 D**  
(CV.5143)

## Limit Ratings

Maximum counting rate : any wave shape	20 kp/s
Maximum total anode current	1.2 mA
Minimum total anode current	700 $\mu$ A
Minimum anode supply voltage (normal room illumination)	420 V
Maximum potential difference between guides and cathodes	180 V

The output cathode must not rise above the potential of the commoned cathodes by **more than 10 volts**, and may be made more than 30 volts negative only when resetting.

## Characteristics

Running voltage at 800 $\mu$ A	215 V approx.
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## Recommended Operating Conditions

*Anode current	800 $\mu$ A
Output cathode load	82 k $\Omega$
Forced resetting pulse	-140 V
Random pulse drive-amplitude	- (144 V $\pm$ 50 V) - 12 V
**Random pulse drive-duration	25 $\mu$ S min.
**Random pulse drive-quiescent time	25 $\mu$ S min.
Random pulse drive—guide bias	+72 $\pm$ 12 V
Sine wave drive-amplitude	65—100 V r.m.s.
Sine wave drive—guide bias	+12 $\pm$ 2 V

\* The required anode current may be obtained from a 475 V supply via a 330 k $\Omega$  resistor.

Note—To reduce the effect of stray capacity to a minimum it is essential that the anode resistor be wired not more than  $\frac{1}{4}$ " (or 5 mm.) from tag 4 on the valve holder.

\*\* The maximum is limited by the repetition rate.



**Mechanical Data**

Mounting position

Any.

For visual indication, the tube is viewed through the dome of the bulb.

Alignment

Cathode "O" is aligned with pin No. 6 to an accuracy of  $\pm 12^\circ$ .

Weight

44 g (nominal).

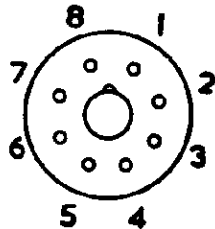
Escutcheons

N.78211 Bakelite or  
N.79368 Brass

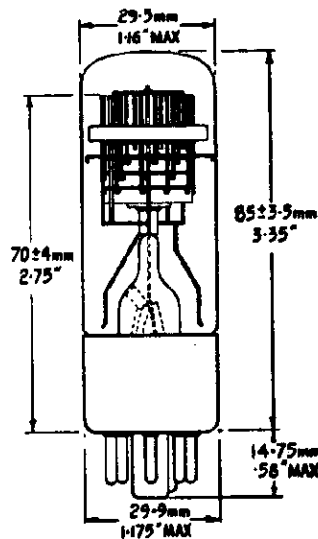
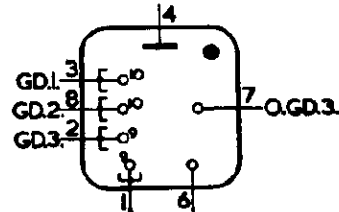
Base

I.O.

Base Connections  
(underside view)

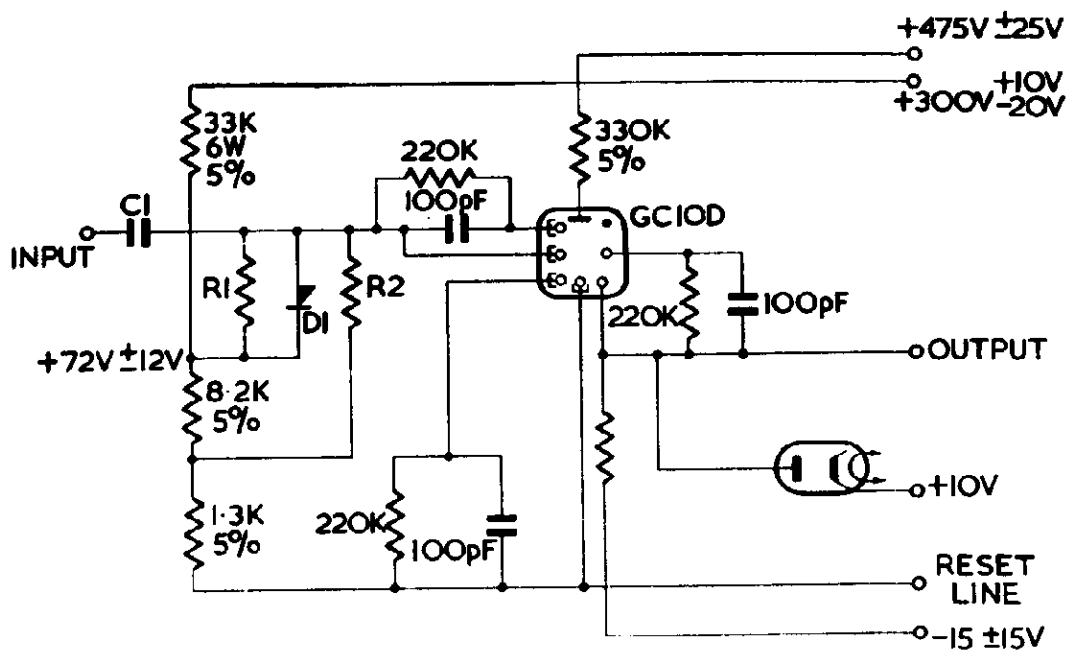


- Pin 1 Common cathodes
- 2 3rd Guides
- 3 1st Guides
- 4 Anode
- 5 —
- 6 Output cathode
- 7 Output 3rd Guide
- 8 2nd Guides



# Scale-of-ten Counter Tube For Single-pulse Operation

**GC10D**  
CV.5143



LK122

Drive	Input		C1	R1	R2	D1
	Duration	Amplitude				
Random pulse	> 25 $\mu$ S	145 +50 V -12 V	0.02 $\mu$ F	1M $\Omega$	Not reqd.	Q3/3
Sine wave	—	65—100 V r.m.s.	To suit lowest frequency	Not reqd.	100k $\Omega$	Not reqd.

**Sine-wave or random-pulse drive for GC10D**

