

QUICK REFERENCE DATA (nominal values)

Maintaining voltage	108	V
Cathode current range	5.0 to 30	mA
Regulation voltage	1.5	V
Ignition delay time	1.3	s

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS—VOLTAGE STABILISER AND REFERENCE LEVEL TUBES which precede this section of the handbook.

CHARACTERISTICS AND RANGE VALUES FOR EQUIPMENT DESIGN measured at an ambient temperature of between 20 and 30°C unless otherwise stated.

The values given state the range over which the tube will operate both initially and during life. No allowance has been made for supply voltage and component variations.

Initial values

Minimum voltage necessary for ignition (note 1)	133	V
Ignition delay time	See page C1	
Maintaining voltage		
Maximum (at $I_k = 30\text{mA}$)	112	V
Minimum (at $I_k = 5.0\text{mA}$)	105	V
Increase in maintaining voltage as cathode current is increased from 5 to 30mA (regulation voltage)		
Maximum	3.5	V
Average	1.5	V

Life performance (note 2)

Minimum voltage necessary for ignition (note 1)	133	V
Maintaining voltage		
In 1000 hrs		
Maximum (at $I_k = 30\text{mA}$)	113	V
Minimum (at $I_k = 5.0\text{mA}$)	104	V
In 3000 hrs (note 3)		
Maximum (at $I_k = 30\text{mA}$)	113	V
Minimum (at $I_k = 5.0\text{mA}$)	104	V
Increase in maintaining voltage as cathode current is increased from 5.0 to 30mA		
Maximum	3.5	V
Typical	1.5	V
Percentage variation of maintaining voltage at 30mA during 1000 hrs life		
Maximum	± 3.0	%
Typical	± 1.0	%

ABSOLUTE MAXIMUM RATINGS

Cathode current

Maximum for continuous operation

30 mA

Maximum surge (note 4)

75 mA

Minimum

5.0 mA

Maximum negative anode voltage

75 V

Minimum bulb temperature ($I_k = 0\text{mA}$)

-55 °C

Maximum bulb temperature

For operation

+150 °C

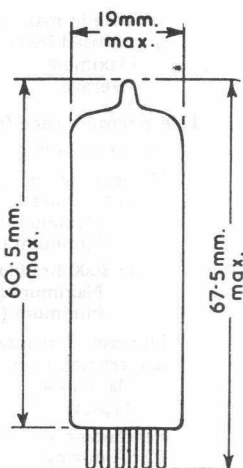
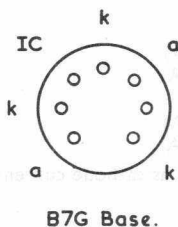
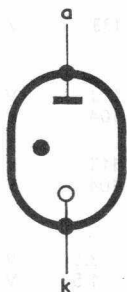
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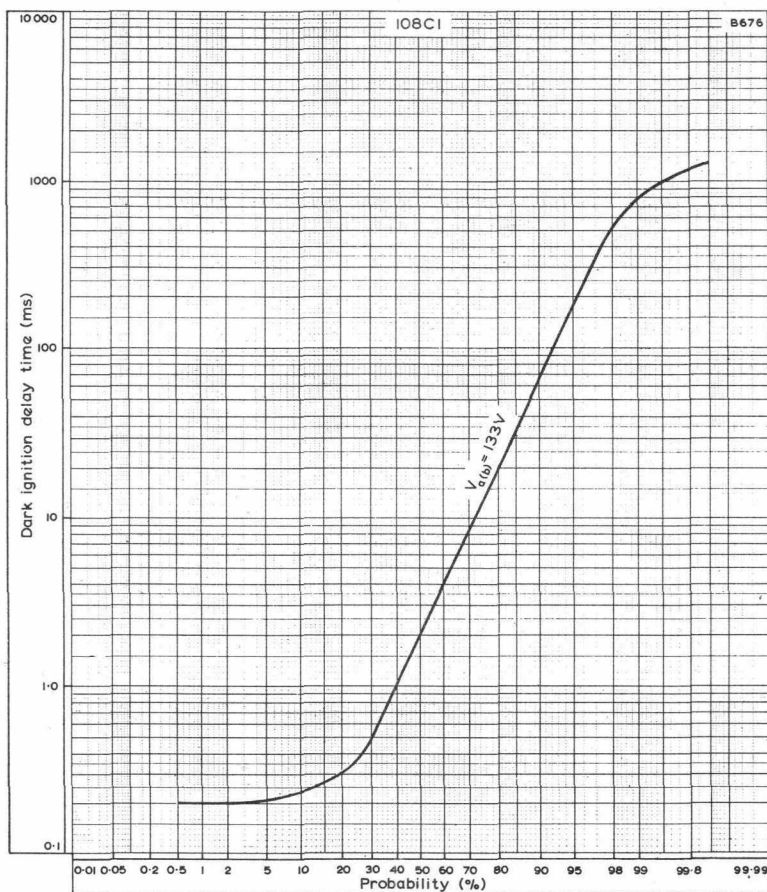
+70 °C

OPERATING NOTES

1. This value holds good over life in light or darkness. See graph on page C1.
2. These figures apply only when the tube is operated continuously at the currents stated.
3. The maintaining voltage for all tubes will stay within the limits given and the change in any individual tube will not exceed +3V or -4V.
4. To be restricted for long life to approximately 30 seconds in each 8 hours' use.

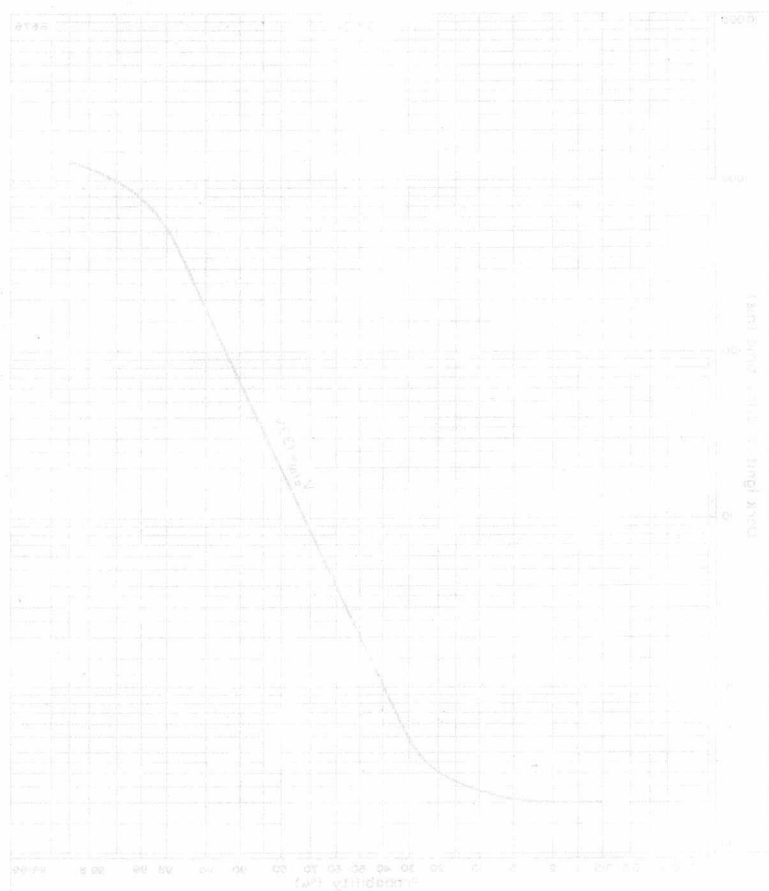
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CUMULATIVE DISTRIBUTION OF DARK IGNITION DELAY TIME

This curve shows the probability that a tube will ignite in less than the time shown. This will be to some extent dependent on the supply voltage. In general an increase in the supply voltage will reduce the ignition delay time.



THE CURVE SHOWS THE PROBABILITY THAT A TUBE WILL IGNITE IN LESS THAN THE TIME SHOWN. THIS WILL BE TO SOME EXTENT DEPENDENT ON THE SUPPLY VOLTAGE. AN INCREASE IN THE SUPPLY VOLTAGE WILL REDUCE THE IGNITION DELAY TIME.

