

QUICK REFERENCE DATA (nominal values)

Maintaining voltage	90	V
Cathode current range	1 to 40	mA
Regulation voltage	12	V
Ignition delay time	2	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. (note 1)

Initial values

Minimum voltage necessary for ignition (note 2)	115	V
Ignition delay time	See page C1	
Maintaining voltage at 20mA		
Maximum	94	V
Minimum	86	V

Increase in maintaining voltage as cathode current is increased from 1 to 40mA (regulation voltage)

Note 3

Maximum	14	V
Average	12	V

Cathode current above which the incremental resistance is positive

2 mA

Typical maximum incremental resistance in the current range 1 to 40mA (note 3)

300 Ω **Life performance (note 4)** $I_k = 20\text{mA}$ $I_k = 40\text{mA}$

Minimum voltage necessary for ignition (note 2)	115	115	V
Percentage variation of maintaining voltage at cathode current (room temperature)			
In 1,000 hrs (maximum)	± 1	± 5	%
In 10,000 hrs (average)	± 3.5	± 5	%
Typical maximum increase in maintaining voltage as cathode current is increased over the current range	13	15	V

ABSOLUTE MAXIMUM RATINGS

Cathode current

Maximum for continuous operation 40 mA

Maximum surge (note 5) 100 mA

Minimum 1.0 mA

Maximum negative anode voltage 80 V

Minimum bulb temperature ($I_k = 0\text{mA}$) -55°C

Maximum ambient temperature

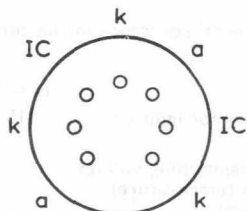
For operation (note 6) $+70^\circ\text{C}$

For storage (note 7) $+70^\circ\text{C}$

OPERATING NOTES

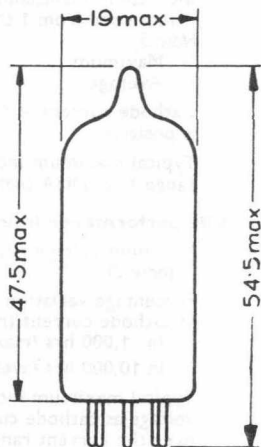
1. Thermal equilibrium is reached within 3 minutes of igniting the tube.
2. This value holds good over life in light or darkness. See graph on page C1.
3. Following a sudden large change in the tube current, the change in maintaining voltage may be slightly greater than that given until tube thermal equilibrium is re-established (within 3 minutes).
4. These figures apply only when the tube is operated continuously at the currents stated.
5. To be restricted for long life to approximately 30 seconds in each 8 hours use.
6. This tube will operate satisfactorily at ambient temperatures up to 70°C providing the tube is not used at the upper end of the current range.
7. The tube should not be stored for more than 4 months at this maximum temperature without intermediate operation.

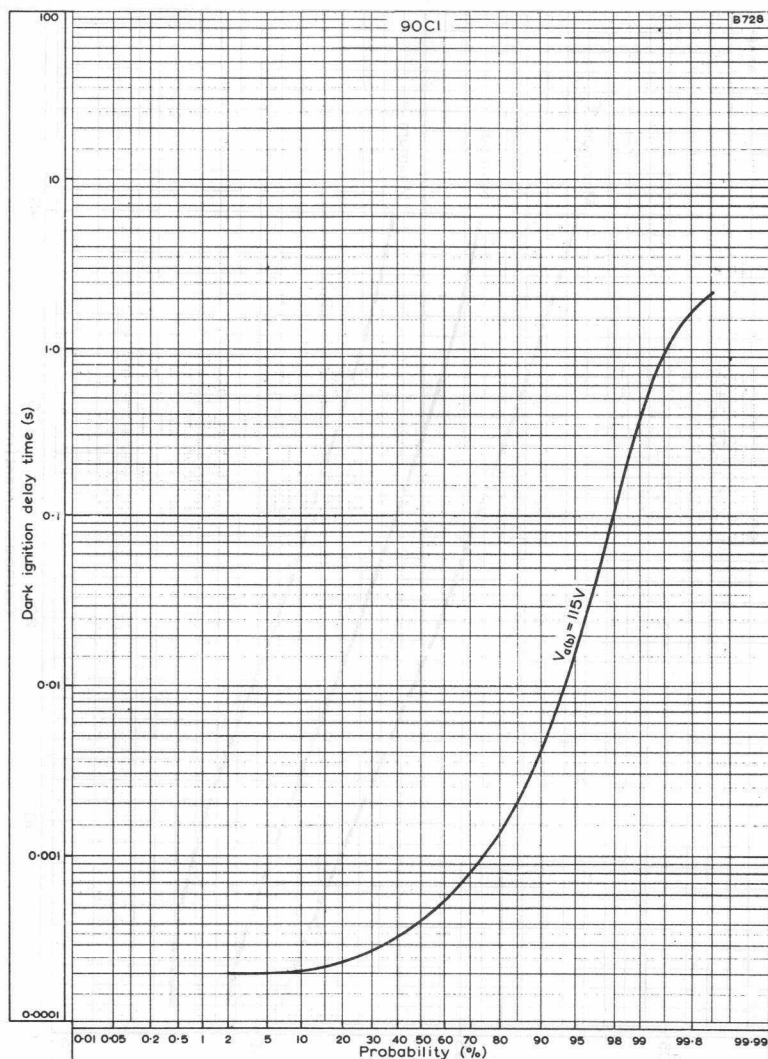
6317



B7G Base

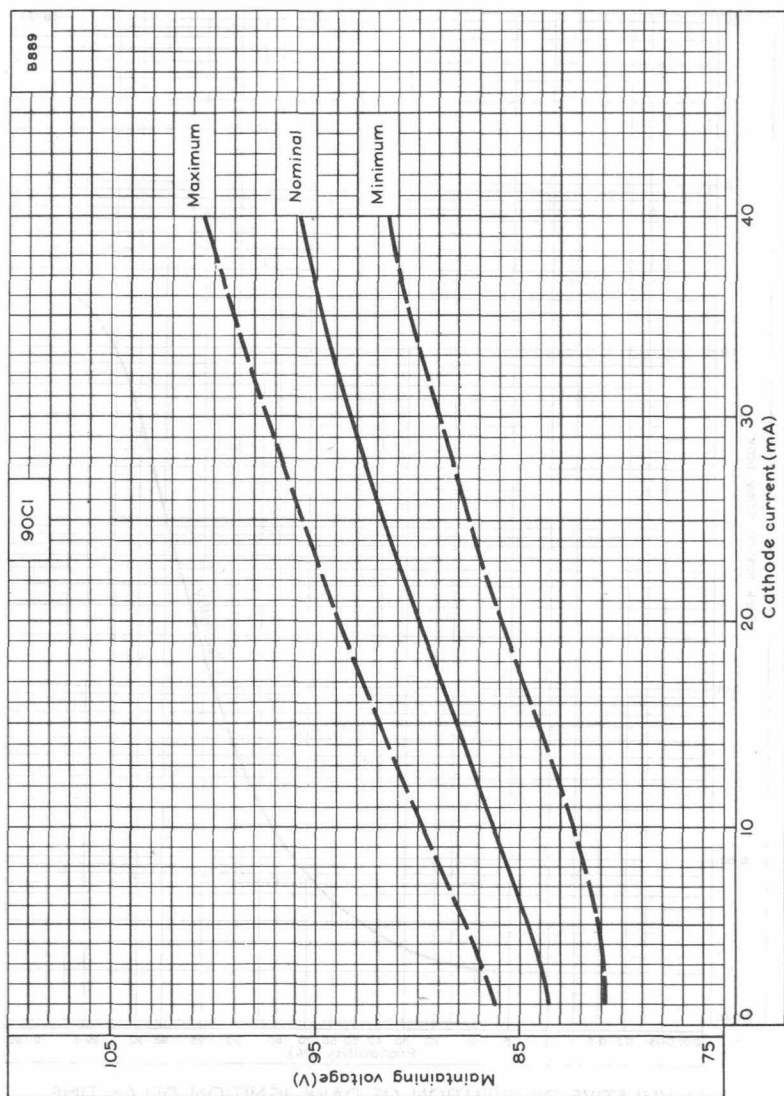
All dimensions in mm





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.



MAINTAINING VOLTAGE PLOTTED AGAINST CATHODE CURRENT
(Initial values)