

MINISTRY OF SUPPLY (S.R.D.E.)

Specification MOS/CV.2257 Issue 1 Dated: 3.11.52 To be read in conjunction with K.1001 excluding clause 5.2		<u>SECURITY</u> Specification Valve Unclassified Unclassified	
→ Indicates a change			
<u>TYPE OF VALVE:</u> Gas-filled Triode <u>CATHODE:</u> Cold <u>ENVELOPE:</u> Glass unmetallised <u>PROTOTYPE:</u> XC11.		<u>MARKING</u> See K.1001/4.	
<u>RATINGS</u>		<u>DIMENSIONS AND CONNECTIONS</u>	
		Note	
Control Gap Breakdown Voltage	(V) 75		
Control Gap Maintaining Voltage	(V) 55	A	See Drawing on page 4.
Main Gap Breakdown Voltage	(V) 215		
Main Gap Maintaining Voltage	(V) 77	A	
Transfer Current	(μ A) 5	B	
Max. Mean Cathode Current	(mA) 1		
Operating Time	(μ Sec) 30		
Extinction Time	(μ Sec) 550	C	
Target Life 5000 hours integrated burning time at 1 mA maximum mean cathode current.			
<u>NOTES</u>			
A. Measured at 1 mA. B. Measured with 175V. between Anode and Cathode. C. Time from 1 mA. Cathode Current.			

TESTS

To be performed in addition to those applicable in K.1001.

	Test Conditions	Test	Limits		No. Tested	Note
			Min	Max		
a	A DC voltage of 60 volts shall be applied between trigger and cathode with the trigger positive and a supply voltage of 175 volts DC shall be connected to the anode through a suitable limiting resistance. The tube shall not strike. The trigger voltage shall then be increased instantaneously to 85 volts and the tube shall strike.	Control Gap Striking Voltage D.C. (V)	-	85	100%	
b	A DC voltage of 190 volts shall be applied instantaneously between anode and cathode with the anode positive and with the trigger connected to cathode. The tube shall not strike.	Main Gap Breakdown Voltage D.C. (V)	190	-	100%	
c	With a supply voltage of 175 volts DC connected to the anode through a suitable limiting resistance the trigger voltage is increased until breakdown in the main gap occurs. The main gap current shall then be adjusted to 1 mA.	Main Gap Maintaining Voltage (V)	70	85	100%	

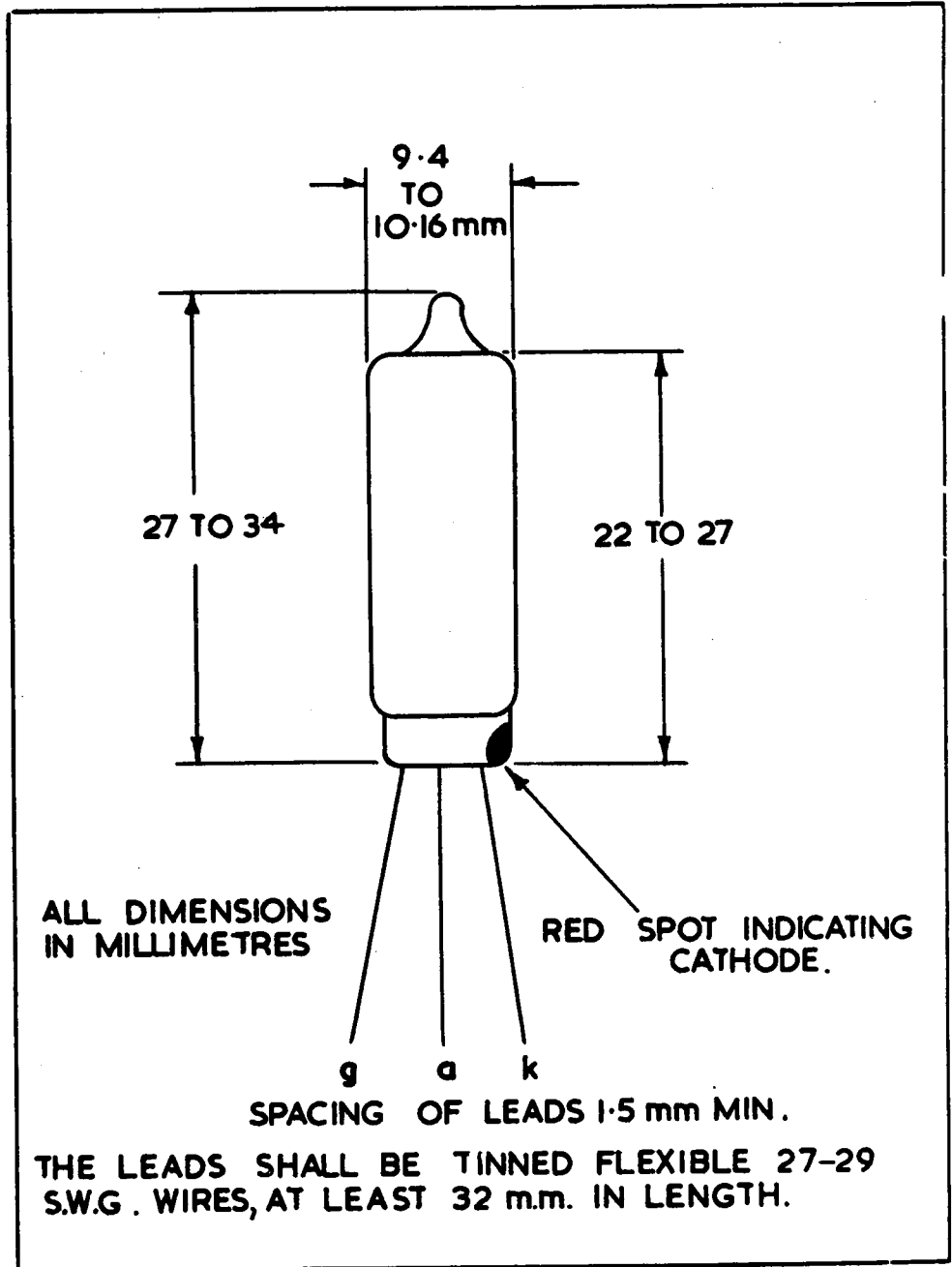
CV2257/1/2

TESTS

To be performed in addition to those applicable in K.1001.

	Test Conditions	Test	Limits		No. Tested	Note
			Min	Max		
d	A DC supply voltage of 175 volts is connected to the anode through a suitable limiting resistance. A DC voltage connected to the trigger through a resistance of 1 meg. shall be increased until breakdown and the transfer to the main gap occurs. The anode supply shall then be disconnected and the current in the trigger circuit measured.	Transfer Current (μA)	-	20	100%	
e	A DC supply voltage of 175 volts shall be connected to the anode through a suitable limiting resistance, a single square top pulse having a height of 115 volts positive and a length of 50 micro-seconds (plus a rise time of 5 micro-seconds) shall be applied to the trigger through a resistance of 1 meg. The tube shall strike.	Operating Time (μSec)	-	50	6/week	
f	With the trigger connected to the cathode through a resistance of 1 meg. the main gap shall be struck and the main gap current adjusted to 1 mA. A single square top voltage pulse having a height of minus 50 volts and a length of 700 micro-seconds shall then be applied to the anode. The tube shall extinguish.	Extinction time (μSec)	-	700	6/week	

CV2257/1/3



CV 2257/1/4

CV 2257/1/4