



# High-Speed Primed- Trigger Cold-Cathode Tube

Code: G1/371K (CVX2224)

The G1/371K is a high-speed primed-trigger tube developed for use with the G10/241E Unidirectional Cold-Cathode Gas Filled Decade Counter for which a single cathode trigger tube is required as a coupling element between tubes. Its speed and general characteristics, however, make it a useful general component. It also has features which make it specially suitable for use in circuits where a high input impedance is required.

## DIMENSIONS.

Maximum overall length	54	mm
Maximum seated height	47.6	mm
Maximum bulb diameter	19.1	mm
Base	B7G	
Net weight	10	g

## MAIN ELECTRODE CHARACTERISTICS.

Maximum pulse current output	15	mA
Maximum D.C. current output	10	mA
Minimum D.C. current output	2	mA
Anode supply voltage range	270 to 360	V←
Main gap maintaining voltage	175 to 185	V←
Maximum cathode voltage output	140	V
Shield voltage applied through 50 kΩ	150	V
Trigger Bias (for $V_a$ up to 325 V)	0 to 165	V
Trigger Bias (for $V_a$ up to 360 V)	60 to 165	V
††Trigger breakdown potential on application of a 25 micro-second square pulse based on maximum bias	12 to 26	V
*De-ionisation Time (max.)	30	μ sec
†Transfer Time (nom.)	0.5	μ sec

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## DIRECT INTERELECTRODE CAPACITANCES.

Trigger to cathode	3.0	pF
Trigger to all other electrodes	5.0	pF

## PRIMING GAP CHARACTERISTICS.

Priming gap current	0.2 to 0.5	mA
Anode feed resistance	390	k $\Omega$
Cathode resistance to earth or main gap cathode potential	56	k $\Omega$

The priming gap cathode must not be more than 140 volts negative to the main cathode at any time.

\*De-ionisation time to be short enough to permit a re-application of the nominal working voltage (90 per cent of maximum, i.e. 325 volts) 30 micro-seconds after the extinguishing of a D.C. discharge of maximum rated current by means of a rectangular pulse applied to the anode. The base of the extinguishing pulse shall be 20 volts below the  $V_m$  of the main gap, all other electrodes may be at potentials within their working range.

†This is the time interval between current flowing in the trigger cathode circuit as the result of applying a trigger pulse, and conduction starting in the main anode-cathode gap.

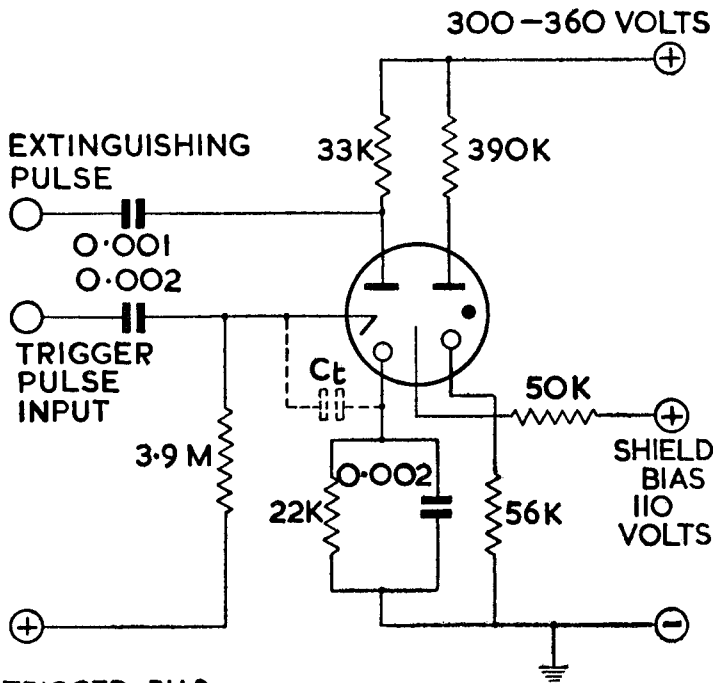
††For pulse widths of less than 25  $\mu$  sec, the triggering pulse-amplitude is an inverse function of the pulse width.



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## CIRCUIT SHOWING THE G1/371K USED AS A TRIGGER TUBE WITH HIGH INPUT LEAK RESISTANCE



TRIGGER BIAS.

THE VALUE OF SHIELD POTENTIAL  
110 VOLTS IS IMPORTANT. THE EFFECTIVE  
TRIGGER-CATHODE CAPACITANCE, C<sub>t</sub>,  
SHOULD BE MADE UP TO 50 pF MINIMUM.

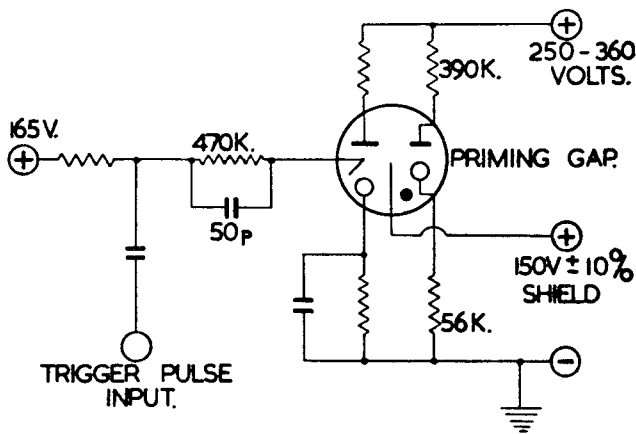
Ref.: G1/371K

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Code: G1/371K (CVX2224)

CIRCUIT SHOWING THE G1/371K USED  
AS A TRIGGER TUBE.

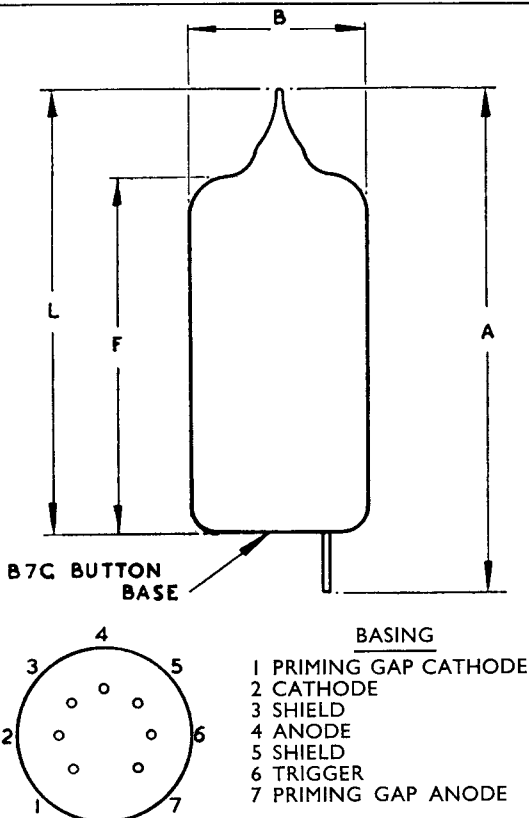


CERTAIN BASIC VALUES ARE GIVEN, OTHER  
VALUES ARE DETERMINED BY THE  
REQUIREMENTS OF THE APPLICATION.



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DIM	MILLIMETRES	INCHES
A	54.0 MAX	$2\frac{1}{8}$ MAX
B	19.1 MAX	$\frac{3}{4}$ MAX
F	$38.1 \pm 2.4$	$1\frac{1}{2} \pm \frac{3}{32}$
L	47.6 MAX	$1\frac{7}{8}$ MAX

NOTE: BASIC FIGURES ARE INCHES