

## COLD CATHODE TRIGGER TUBE

# Z801U

*Cold cathode inert gas-filled tube with priming discharge. Primarily intended for use in conjunction with Geiger-Muller tubes in radiation monitoring equipment and for use in low current stabiliser circuits.*

### PRELIMINARY DATA

The predominant characteristic of the Z801U is its very high charge sensitivity. A high charge sensitivity is obtained when a negative triggering pulse is applied to the auxiliary cathode via a small capacitor. The quoted value of charge sensitivity represents the amount of energy which must be injected into the auxiliary cathode to initiate the main discharge. The tube can also be fired by a positive pulse applied to the trigger but the charge sensitivity with this mode of operation is considerably lower. In self extinguishing operation the tube can be used with a relatively low value of anode resistor. This tube is not subject to photoelectric effects.

The circuit must be arranged to ensure that a current of  $0.4\mu\text{A}$  flows continuously from the trigger electrode to the auxiliary cathode. This tube is designed for use with unidirectional voltages.

### CATHODE

Cold

### CHARACTERISTICS

Nominal maintaining voltage at 2mA	105	V
Recommended priming current	0.4	$\mu\text{A}$

### LIMITING VALUES (Absolute ratings)

Maximum anode voltage at which self ignition will not occur in any tube	170	V
Minimum anode to cathode voltage for transfer with a recommended trigger capacitance of $120\mu\text{F}$	150	V
Maximum peak cathode current	10	mA
Maximum mean cathode current (averaging time 15 secs)	2.5	mA
Maximum peak auxiliary cathode current	4.0	mA
Maximum mean auxiliary cathode current	1.0	mA
Maximum priming current (Trigger to auxiliary cathode)	0.6	$\mu\text{A}$
Minimum priming current	0.25	$\mu\text{A}$
Minimum charge required by auxiliary cathode to ensure triggering in circuit shown in Fig. 1	45	$\mu\text{C}$

**Note.**—The maximum operating speed is largely determined by the circuit used and is of the order of 400 c/s.

The information contained in this data sheet does not imply any authority or licence for the utilisation of any patented feature.

# Z801U

## COLD CATHODE TRIGGER TUBE

Cold cathode inert gas-filled tube with priming discharge. Primarily intended for use in conjunction with Geiger-Muller tubes in radiation monitoring equipment and for use in low current stabiliser circuits.

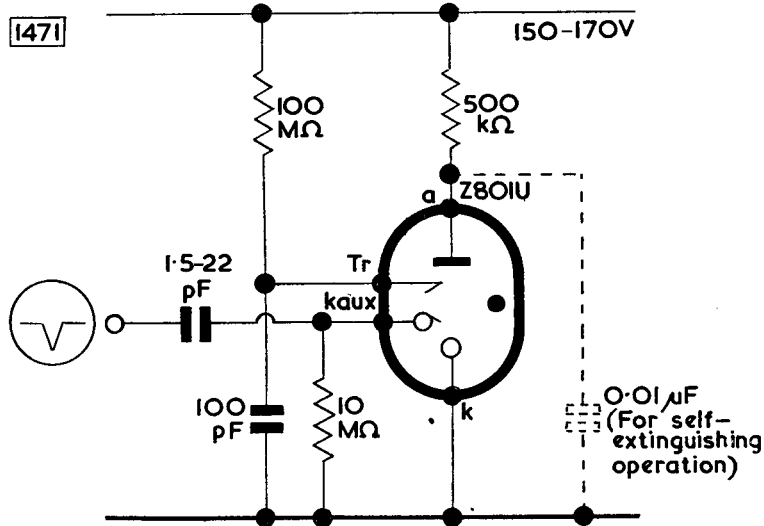


FIG. 1

