

ED40

**Ferranti****STROBOSCOPIC LIGHT SOURCE**

A Xenon filled stroboscopic Flash Tube designed for low voltage operation for use in applications at frequencies up to 250 flashes per second. It emits a white light.

**PHYSICAL DETAILS.**

Electrode Connections ...	Flexible Leads
Max. Overall Length (excl. leads)	45 mm. (1.772")
Max. Width ... ..	20 mm. (.787")
Max. Diameter of Glass Tube	7 mm. (.276")

**ELECTRODE CONNECTIONS.**

The anode lead is marked red.

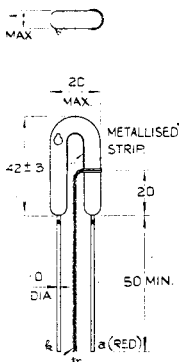
**RATINGS.**

Max. Anode Voltage (Static)	600 volts
Max. Anode Voltage (Working)	500 volts
Min. Anode Voltage (Working)	350 volts
Max. Flash repetition rate ...	250 per sec
Max. Dissipation ... ..	6 watts
Min. Charging Resistor ...	7.5 k $\Omega$

**TYPICAL OPERATION.**

DC. Supply Voltage ... ..	450 volts
*Trigger Voltage ... ..	4 to 6 kV
Charging Resistance ... ..	7.5 k $\Omega$
Discharge Capacitor:—	
0—25 f.p.s. ... ..	2.0 $\mu$ F
25— 50 f.p.s. ... ..	1.0 $\mu$ F
50—150 f.p.s. ... ..	0.5 $\mu$ F
150—250 f.p.s. ... ..	0.25 $\mu$ F

See overleaf for a typical stroboscope circuit with suitable component values.



2 WIRES  
TWISTED TOGETHER.

Dimensions  
in Millimetres

\*A suitable trigger pulse transformer is Ferranti Type PT.56.

**Ferranti**

**TYPICAL OPERATION (Continued).**

The circuit of a Stroboscope providing repetition rates up to 250 flashes per second in 4 ranges is shown below.

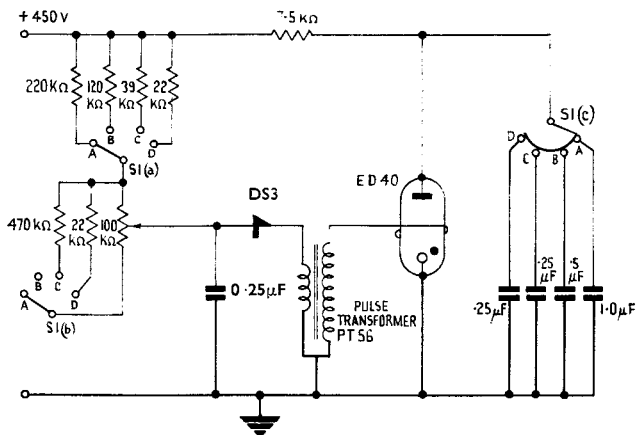
In this equipment a silicon p-n-p-n switch (Ferranti type DS.3) is used to provide a simplified trigger circuit.

The repetition rate is controlled by the 100kΩ potentiometer which may be calibrated.

Switches S1(a), S1(b) and S1(c) are ganged.

The approximate flashing frequency of the four ranges is as follows:

Switch in position	A	...	15— 25 f.p.s. ( 900—1500 r.p.m.)
	B	...	25— 50 f.p.s. (1500—3000 r.p.m.)
	C	...	50—140 f.p.s. (3000—8000 r.p.m.)
	D	...	140—250 f.p.s. (8400—15000 r.p.m.)



The 7.5 kΩ charging resistor should be preferably of the vitreous type with a dissipation rating of 14 watts.

As the frequency of operation of the p-n-p-n switch is dependent on voltage, the above range coverage is only applicable with an input voltage of 450 V D.C. and with resistors of close tolerance (5%).

Other types of controlled trigger circuits to produce the necessary triggering pulse for the ED.40 may of course be used.