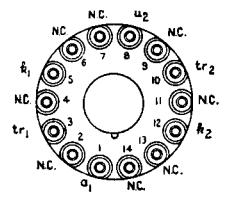
Ferranti

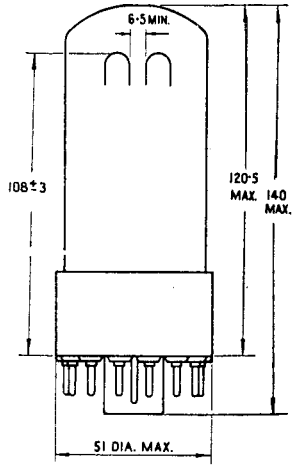
EDN10

STROBOSCOPIC LIGHT SOURCE

A xenon filled cold cathode arc discharge tube incorporating two independent EN55 assemblies. The tube is designed for stroboscopic operation with interlaced trigger circuits to provide flash rates of up to 800 per second. (The tube can be operated at flash rates of 1000 per second in specially designed circuits.) It emits a white light.



Base Connections
Underside View of Base



All dimensions shown are in millimetres

PHYSICAL DETAILS.

Base	B14A (Diheptal)
Max. Seated Height	120·5 mm. (4·74")
Max. Overall Length	140 mm. (5·51")
Max. Dia. (over base)	51 mm. (2·08")
Mounting Position...	Any

BASE CONNECTIONS.

Pin 1—Anode 1
Pin 2—No Connection
Pin 3—Trigger 1
Pin 4—No Connection
Pin 5—Cathode 1
Pin 6—No Connection
Pin 7—No Connection
Pin 8—Anode 2
Pin 9—No Connection
Pin 10—Trigger 2
Pin 11—No Connection
Pin 12—Cathode 2
Pin 13—No Connection
Pin 14—No Connection

RATINGS. (Each section)

(All maximum ratings are 'absolute')

Max. Anode Voltage (DC. Static)	...	1000 volts
Max. Anode Voltage (working)	...	900 volts
Min. Anode Voltage (working)	...	700 volts
*Max. Dissipation	...	20 watts
Max. Discharge Capacitor ...	...	6 μF
†Min. Charging Resistor (12–150 c/s)	...	8 kΩ
(150–400 c/s)	...	11 kΩ
Max. Operating Frequency ...	...	400 c/s

CHARACTERISTICS.

‡*Trigger Voltage	...	2–4 kV
§Typical Peak Luminous Intensity	...	140,000 Candelas
§Typical Flash Duration at $\frac{1}{3}$ peak	...	25–30 μSec

*See Notes on Operation—Page 2.
†For stroboscopic operation these resistors should be rated for 25W dissipation.
‡Peak pulse voltage.
§V_a=900 C=6μF.

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NOTES ON OPERATION.

Discharge Capacitor. Should be a good quality type with sufficient working voltage continuous rating, preferably non-inductive and designed for high current pulse operation.

Discharge Energy. It is important to ensure that the energy dissipated in the tube does not exceed the maximum rating given on Page 1. Over-running the tube even for very short periods may cause permanent damage, resulting in erratic operation particularly at the higher frequencies and/or shortened life.

Trigger Voltage. The trigger voltage is the peak pulse voltage.

Connecting Leads. Because of the very high peak current of the discharge all the leads in the discharge path connecting the capacitor with anode and cathode should be of heavy gauge and as short as possible in order to ensure the maximum discharge energy.

Flash Duration. The duration of the light flash with a 4 μF. capacitor charged to 800 volts is approximately 15–20 microseconds at $\frac{1}{3}$ of the peak luminous intensity. Higher energy discharges will lengthen the duration of the discharge and lower energy discharges are shorter.

WARNING. The use of high voltages and capacitances constitutes a hazard and care should be taken in operating or repairing any equipment incorporating these tubes.

SPECTRAL CHARACTERISTICS.

DISTRIBUTION OF RATE OF EMISSION OF ENERGY OVER THE VISIBLE SPECTRUM.