FLASH TUBE

LSD2

Micro-second Flash Tube for high-speed photography.

MULLARD LSD2

GENERAL

The LSD2 is a cold cathode gas-filled discharge tube giving a high intensity luminous flash of extremely short duration suitable for high speed photography. It is intended for single flash operation at intervals of not less than I minute. The effective duration of the photographic flash is of the order of I micro-second, the exact duration being ultimately determined by the self-inductance of the discharge capacitor and its associated leads. This inductance should, therefore, be kept as low as possible.

www.DataShee4U.<u>LIMITING VALUES</u>

Maximum energy dissipation within tube 35 joules Effective duration of photographic flash 1 µ sec Anode breakdown voltage 10,000 V Minimum anode voltage 5,000 V Recommended working anode voltage Minimum peak trigger voltage (from spark-coil) 5,000 V

DISCHARGE CAPACITOR

Owing to the extremely high peak current associated with micro-second discharges, the losses in the capacitors and leads are such that it is unlikely that more than 60% of the capacitor energy will be dissipated in the flash tube. It is therefore permissable to use a luF capacitor at 10KV or a 2µF capacitor at 7.5KV corresponding to 50 joules and 56 joules respectively in the capacitor.

COLOUR OF DISCHARGE

Bluish white of high actinic value.

DELAY TIME

(a) Internal - from triggering impulse breakdown to production of luminous flash:-

at
$$V_a = 10,000 \text{ V}$$
 1 μ sec at $V_a = 7,500 \text{ V}$ 3 μ sec

(b) External - dependent upon triggering circuit.

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