

TRIGGERED SPARK GAPS

GENERAL INFORMATION AND APPLICATIONS

The RU87 Series of triggered spark gaps are gas-discharge tubes, hermetically sealed in ceramic/metal envelope. Switches with a DC hold-off voltages ranging from 800V to 6kV are available. This is signified by numbers following (-) sign and expressed in kilovolts, e.g. RU87-5 has a 5 kV DC breakdown voltage.

They are suitable for capacitor switching applications such as flash lamps, gas lasers, medical lithotripters, and as crowbar protection devices.

THE SWITCH DOES NOT CONTAIN ANY RADIOACTIVE, TOXIC HAZARDOUS SUBSTANCES.

PRODUCT SPECIFICATIONS

Specification	Unit	Maximum Value
Self-Breakdown Voltage Range (SBV) ^(Note 1)	kV	0.8-6.0
Peak Current, single discharge ^(Notes 2,3)	kA	1.0
Repetition Rate ^(Note 4)	pps	100
Charge Transfer, single discharge ^(Note 5)	C	0.1
Minimal trigger voltage	% SBV	50
Typical life @10mC per shot	shots	100 000
Operating temperatures	°C	-60 ... +150
Net weight	g	40 max.

Important! All ratings given in this data sheet are absolute, non-simultaneous ratings. It is the equipment designer's responsibility to ensure that they are not exceeded. The spark gap life depends on circuit conditions such as peak discharge current and duration, charge transfer per discharge and the repetition rate.

NOTES

- Operating voltage range ($U_{max} \div U_{min}$) for a specific tube is defined by SBV. Optimum breakdown voltage is typically 40 to 80% of SBV. Operation at SBV value may result in self-firing over time.
- Current pulse waveform - damped sinusoid with the second half-wave amplitude not more than 20 % of the first half-wave.
- The tube can be operated with peak currents up to 10 kA, however limiting the peak current can increase spark gap life.
- The life of a spark gap increases with decreasing repetition rate. Recovery time with low duty operation is very short (microseconds) and high repetition rates are possible.
- Long life depends on even distribution of the discharge around the electrodes. The electromagnetic fields generated by the discharge may be sufficient to produce a preferred discharge path which in turn might lead to excessive local erosion and reduced life.

ORDERING INFORMATION

- RU87-X X – SBV value.
- Please indicate your impulse voltage requirements, switching capacitance/energy per shot and pulse repetition rate.

OUTLINE

(all dimensions are in millimeters)

