1531-A/B and 1538-A Strobotac Series

Strobotac provides two high quality models to chose from to fulfill your electronic stroboscopic needs.

The 1531-AB for most applications and the 1538-A for situations requiring very high flash rates.

Both instruments offer proven reliability and are still manufactured to the same exacting GenRad specifications.

Features:

Model 1531-AB

- Flash rates up to 25,000 fpm with accuracy of +1.0%
- Unique, rugged carrying case for portability
- Flash duration ranging from 0.8 µs to 3.0 µs for
- clear, crisp images

Model 1538-A

- High Speed, adjustable flash rates up to 150,000 fpm
- Direct reading in four ranges with ±1.0% accuracy
- Flash duration from 0.5 µs to 3.0 µs for clear, crisp images
- Unique, rugged carrying case for portability
- Can be battery operated

1531-AB Stroboscope

1538-A Stroboscope

DESCRIPTION

Compact and accurate. These strobes are small portable flashing-light sources used to measure the speed of fast-moving devices or to produce the optical effect of stopping or slowing high-speed motion for observation.

A build-in system uses the power-line frequency for quick and easy checks and adjustment of the flash-rate calibration.

Each flash lamp/reflector assembly is hinged at the panel and the reflector swivels 360 degrees, for complete flexibility.

The cases have an integral carry handle and protect the stroboscope in a metal flip-case.

Versatile synchronization:

A variety of trigger inputs can be used for flash synchronization.

Contact closures, pulses, or sinusoidal signals will trigger the flash, and an output trigger is provided so the stroboscope, in turn, can trigger another device.

Single-flash photographs of high-speed motion are a snap with any still camera.

The 1531-AB and 1538 are designed using the same construction which allows interchangeability of internal assemblies, regardless of the age of the stroboscope.

The differences:

The 1531-AB is more economically priced.

On the other hand, the 1538 gives you six times the maximum flash rate of the 1531, and enables portable operation with an optional rechargeable battery.

The 1538-A can also be used with an optical extension lamp and high intensity flash capacitor options.

1538-9601 Lamp for 1531 and 1538

1538-9602 Extension Lamp

1538-9603 Battery Source and Charger

1538-9604 High Intensity Flash Capacitor

1531-A/B and 1538-A Strobotac Series

SPECIFICATIONS

1531-AB:

Flash Rate:
110 to 25,000fpm in 3 ranges; speeds up to 250,000rpm can be measured.

Accuracy:
±1% of reading after calibration on one range against 50-to-60Hz line frequency.

External Trigger:
Input and output connections are phone jacks.
Input: Contact opening, pulse ≥ +6V pk-pk, or sinewave ≥ 2V rms for f>5Hz.
Output: Negative pulse ≥ 500 to 1000V

Light Output:
Beam width 10º degrees at ½-intensity points.

Flashes per minute	Duration* (µs)	Energy** (watt-seconds)	Beam intensity*** (candela)
at 690	3	0.5	11×10^6
at 4170	12	0.09	3.5×10^6
at 25,000	0.8	0.014	0.6×10^6

* Measured at 1/3 peak intensity.

** Electrical input to lamp.

*** Measured with silicon photo detector 1 meter from lamp; single-flash beam intensity is 18×10^6 candela

1538-A:

Flash Rate:
110 to 150,000fpm in 4 ranges; speeds up to 1,000,000 rpm can be measured.

Accuracy:
1% of reading after calibration on 670 to 4170fpm range against 50-to-60Hz line frequency.

External Trigger:
Input and output connections are phone jacks.
Input: Contact closure, pulse ≥ +1V pk-pk, or sinewave ≥ 0.35V rms for f>5Hz (3.5V at 10Hz)
Output: ≥ +6V behind 400 Ω.

Light Output:
Beam width 10º at ½-intensity points.

Flashes per minute	Duration* (µs)	Energy** (watt-seconds)	Beam intensity*** (candela)
at 690	3	0.5	15×10^6
at 4170	1.2	0.09	5×10^6
at 25,000	0.8	0.014	1×10^6
at 150,000	0.5	0.0023	0.16×10^6

* Measured at 1/3 peak intensity.

** Electrical input to lamp.

*** Measured with silicon photo detector 1 meter from lamp; single-flash beam intensity with - P4 is 44×10^6 candela

Power:

100 to 125 V, or 200 to 250 V, 50 to 400 Hz,

25 W max for 1531, 15 W max for 1538;

1538 can also be powered from 20 to 30 V DC, 12 W max.

Mechanical: Flip-Tilt Case.

Dimensions: 16.8 cm H x 27.0 cm W x 15.6 cm D (6.63" x 10.63" x 13")

Weight: 3.5 kg (7.5 lb.) net, 4.6 kg (10 lb.) shipping

ORDERING INFORMATION

Catalog Number	Item	Line Voltage (V)
1531-9430	1531-AB	115
1531-9440	1531-AB	230
1538-9701	1538-A	115
1538-9702	1538-A	230

Includes:
Power cord
Calibration certificate traceable to SI
Phone plug for input and output jacks

Accessories for 1531 and 1538

Calibration data

1538-9601 - 1538-P1 Replacement Strobotron flash lamp, or 1531/1538

Accessories for 1538-A only:

1538-9602 - 1538-P2 Extension Lamp

1538-9603 - 1538-P3 Battery and Charger

1538-9604 - High Intensity -Flash Capacitor; increases output light output by approximately 6 times.