



Contents
p. 2

Applic.
pp. 4-8

Selection
pp. 9-11

Products
pp. 12-87

GenRad
products
pp. 50-87

Index
p. 89

Electronic Stroboscopes

1531-AB and 1538-A Strobotac® Series

p. 1

Strobotac provides two high quality models to choose 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.

- For machine maintenance
- Real time inspection of moving parts
- Printing press applications
- Motor troubleshooting
- For stopping motion
- 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 μ s to 3.0 μ s for clear, crisp images

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 standard sockets (0.25 x 20 threads/inch) for tripod mounting.

Model 1531-AB and 1538-A Strobes



- MODEL 1538-A:
 - High speed, adjustable flash rates up to 150,000 fpm provide direct reading in four ranges with $\pm 1.0\%$ accuracy
 - Flash duration from 0.5 μ s to 3.0 μ s for clear, crisp images
 - Unique, rugged carrying case for portability
 - Can be battery operated

Versatile synchronization: A variety of trigger inputs can be used for flash synchronization. Contact closures, pulses, or sinewave 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 difference: The 1531 is more economical to buy. On the other hand, the 1538 gives you six times the maximum flash rate of the former, and enable portable operation with a rechargeable battery. The 1538-A can also be used with an optical extension lamp.

* 1538-P2 Extension Lamp; accessory for the 1538-A



1531-AB and 1538-A Strobotac® Series

p. 2 of 2

SPECIFICATIONS

SERIES 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 10° degrees at ½-intensity points.

SERIES 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 10° at ½-intensity points.

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

Flashes per minute	Duration* (µs)	Energy** (watt-seconds)	Beam intensity*** (candela)
at 690	3	0.5	15 x 10 ⁶
at 4170	1.2	0.09	5 x 10 ⁶
at 25,000	0.8	0.014	1 x 10 ⁶
at 150,000	0.5	0.0023	0.16 x 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 x 10⁶ candela

* 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 x 10⁶ candela

Features

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	Voltage Model (V)
1531-9430	1531-AB	115
1531-9440	1531-AB	230
1538-9701	1538-A	115
1538-9702	1538-A	230

INCLUDES:
Calibration Certificate Traceable to NIST
Adjustable Neck Strap
Phone plug for input and output jacks
Power Cord

OPTIONS

Calibration Data

1538-9601 1538-P1 Replacement Strobotron Flash Lamp, for 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

