SUGAWARA

LED**STROBE**
LS-V

Check the motion without stopping it.

Supports a wide range of needs with an extensive lineup of six short-to-long sizes!

SUGAWARA Laboratories Inc.

LED Strobe

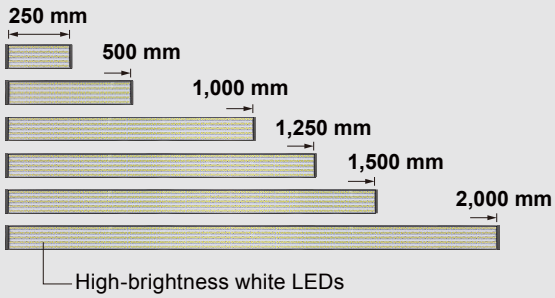
The LS-V series is a complete set of multifunction LED stroboscopes.

It supports diverse stroboscope applications such as surface inspection of steel sheets, paper, and film, checking of printed materials, observation of high-speed rotation and high-speed movement, and measurement of rotation speed.
It is equipped with diverse flash functions such as internal trigger flashing, external trigger flashing, delay, frequency division, and slow motion.

■Features

● Uniform and bright illumination

Flashing surface comes in six sizes: all 90 mm high with widths of 250 mm, 500 m, 1,000 mm, 1,250 mm, 1,500 mm, and 2,000 mm.
Emits bright and even light using high-brightness white LEDs.

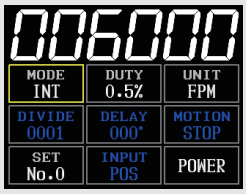


● Reduces the labor and cost of replacing lamps and filters

The use of LEDs reduces the labor and running costs of replacing lamps (*).
Fan-less cooling makes maintenance such as replacing filters unnecessary.
* Reduces cost by about 300,000 yen per LS-V unit per year (compared with Sugawara SS-800DL)

● Diverse and easy-to-use functions

Controller is easy to operate using a knob and a single screen. Up to 10 settings can be saved using a memory function. It is equipped with diverse flash functions such as internal trigger flashing, external trigger flashing, angle delay, time delay, frequency division, and slow motion. In the inspection of printed matter, the number of flashes can be easily set using the conveyor encoder signal and the number of printed sheets.



Controller display


Controller CB-LSV

● Up to twelve LS-V units can be simultaneously controlled with an attachable/detachable controller

It can be used as an integrated stroboscope or separately from the controller to support a variety of usage environments. Multiple LS-V units can be connected enabling simultaneous illumination of separated locations or extension of the illumination range.

● Mounting brackets simplify installation of stroboscope and adjustment of mounting angle

Two types of mounting brackets to choose from: L-type and I-type.
Using the L-type enables the LS-V to be used as a tabletop stroboscope.

■System configuration

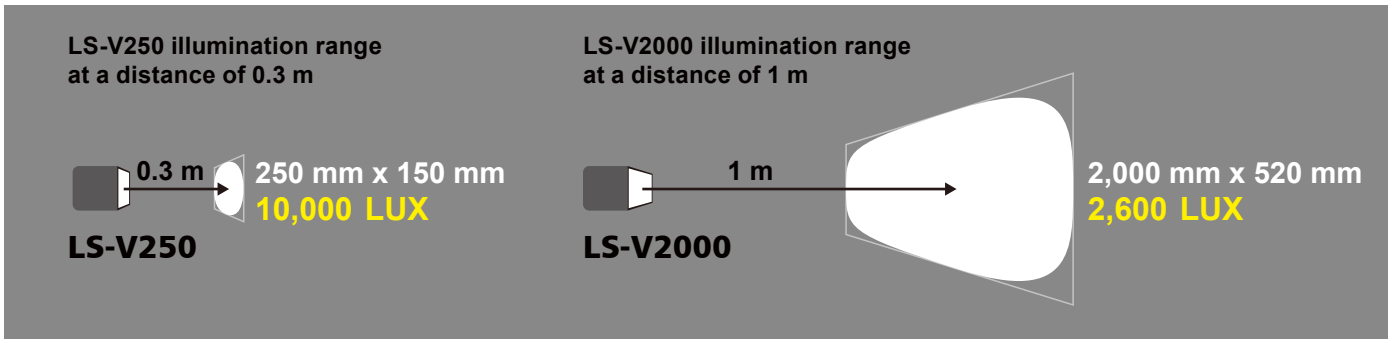
●Various connection cables are available as options.


[Configuration example]

■Illumination range and brightness

You can choose the model that best fits your usage environment such as illumination range and illumination distance.

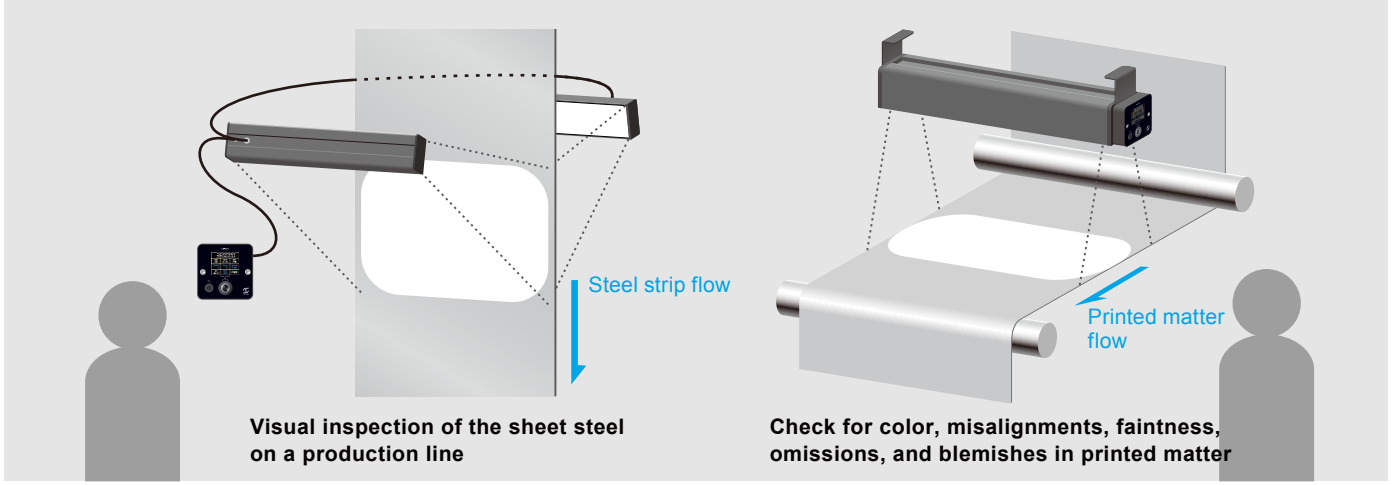
Model	Flashing surface width [mm]	Illumination range [mm x mm]		Brightness [LUX]	
		Distance 0.3 m	Distance 1 m	Distance 0.3 m	Distance 1 m
LS-V250	250	250 x 150	500 x 500	10,000	1,600
LS-V500	500	500 x 160	600 x 510	9,000	2,600
LS-V1000	1,000	1,000 x 170	1,150 x 520	9,000	2,600
LS-V1250	1,250	1,250 x 170	1,400 x 520	9,000	2,600
LS-V1500	1,500	1,500 x 170	1,650 x 520	9,000	2,600
LS-V2000	2,000	2,000 x 170	2,000 x 520	9,000	2,600



■Example of wiring

■Application examples

- Visual inspection of the sheet steel on a production line
- Check for color, misalignments, faintness, omissions, and blemishes in printed matter
- Measuring the spindle rotational speed, yarn balloon inspection, and loom timing adjustment in textile production
- Visual inspection of high-speed rotation and high-speed movement
- Measuring rotational speed and checking operation of various rotating devices such as motors
- Observing the vibration of automobile and motorcycle components

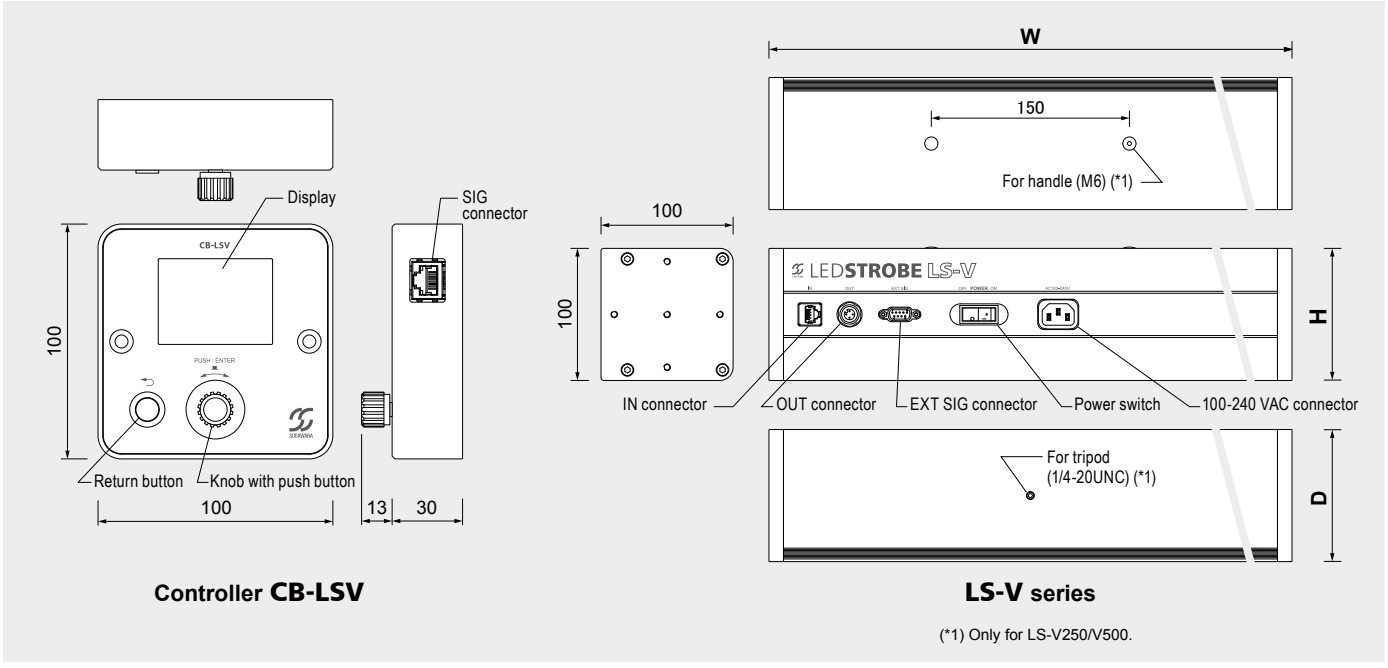


LED Strobe

■ Specifications

Model		LS-V250	LS-V500	LS-V1000	LS-V1250	LS-V1500	LS-V2000
Flash f requeny range	INT	30–360,000 FPM (0.5-6,000 Hz), Resolution: 1 FPM (0.1 Hz)					
	EXT	0–60,000 FPM (0-1,000 Hz), Resolution: 0.1 FPM (0.1 Hz)					
Internal trigger accuracy		±0.01%					
External trigger measurement accuracy		± (0.01%+1digit)					
Flash duration		From 1 µsec to the time equal to 1% of a flash cycle, max. 200 µsec, resolution 0.1 µsec					
External trigger	Voltage	H Level: 3–5 VDC, L Level: 0–1 VDC, Input impedance: Approx. 11 kΩ, Pulse width: 10 µsec or more					
	Contact	ON resistance: 1 kΩ or less, ON current: 18 mA, OFF resistance: 10 kΩ or higher, OFF voltage: 5 V					
	Current	ON Level: 9–18 mA, OFF Level: 0.1 mA or less, Pulse width: 10 µsec or more					
Synchronization edge	Voltage	Rising edge or falling edge					
	Contact	Close or open					
	Current	Current ON or Current OFF					
Angle delay		0-359°, Resolution: 1°					
Time delay		From 0 msec to the time of input signal cycle time, max. 2,000 msec, Resolution 1 msec					
External signal f requency division function		Maximum number of frequency-divisions: 1,000					
Encoder-signal f requency dividing function		Maximum number of encoder signal: 1,000 P/R, Maximum number of flashes: 1,000 times/R					
Slow motion		-1.0 r/s (moving forward)–+1.0 r/s (moving backward), Resolution 0.1 r/s					
Memory function		Number of settings that can be saved: 10					
Number of linked units		Max. 12 units					
Power requirement		100–240 VAC±10%, 50/60 Hz					
Consumption current		Approx. 0.3 A	Approx. 0.4 A	Approx. 0.5 A	Approx. 0.7 A	Approx. 0.8 A	Approx. 0.9 A
Usage environments	Temperatures	0–+40˚C					
	Humidity	20–90%RH, without dew condensation					
Dimensions W x H x D mm / Weight		Controller: 100 x 100 x 30, 400 g					
		272 x 100 x 100	522 x 100 x 100	1,022 x 100 x 100	1,272 x 100 x 100	1,522 x 100 x 100	2,022 x 100 x 100
		2 kg	3 kg	5 kg	6 kg	7 kg	9 kg

■ Extenal view



(*1) Only for LS-V250/V500.

危険

- **Do not touch the inside of the apparatus.**
- **Do not look directly at the flashing LEDs.**
- **Read the operation manual carefully.**

* Specifications are subject to change without prior notice for improvement.

Products: **Xenon Flash, Torque Dynamometers, Bearing Inspection Systems, etc.**

SUGAWARA Laboratories Inc.

☐ **Head office** / ☐ **Tokyo sales office** | 8-2 Minami-Kurokawa, Asao-ku, Kawasaki-shi, Kanagawa, 215-0034, Japan
Tel: +81-44-989-7320 Fax: +81-44-989-7338

☐ **Osaka sales office** | 6-17 Yokomakura-Nishi, Higashiosaka-shi, Osaka, 578-0956, Japan
Tel: +81-72-966-1061 Fax: +81-72-966-0961

☐ **Nagoya sales office** | 1-2-29 Kamimaezu, Naka-ku, Nagoya-shi, Aichi, 460-0013, Japan
Tel: +81-52-331-6562 Fax: +81-52-331-6604

URL: https://www.sugawara-labs.co.jp/ E-mail: info@sugawara-labs.co.jp

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