

VIGI-Lux™ Machine Vision Strobes

by Excelitas

MVS 5000 Series



Overview

The VIGI-Lux™ MVS 5000 Machine Vision Strobe by Excelitas produces short duration, high intensity light pulses for machine vision applications.

The Xenon flashlamp in the VIGI-Lux MVS 5000 produces intense pulses of radiant energy covering the full light spectrum from the ultraviolet (UV) to the visible (VIS) to near infrared (NIR). The spectral output of the Xenon lamp when coupled with CCD, CMOS and CID silicon

cameras freezes motion, eliminates blur, and enhances image quality with high intensity and short duration pulses.

The VIGI-Lux MVS 5000 is a DC powered unit. The linear Xenon flashlamp is packaged in a metal enclosure with a fan for cooling. This strobe incorporates a reflector for maximum intensity and a diffuser window for even illumination of the target area. Input power and signal level cable connections are made through a 9 pin connector mounted on the back of the unit.

Features and Benefits

- ▶ Long life Xenon flashlamp: > 10⁸ flashes
- ▶ Flash rates to 30 Hz
- ▶ Uniform illumination
- ▶ Compact
- ▶ Light weight
- ▶ 12 VDC input
- ▶ Optically isolated trigger input
- ▶ Reduced EMI

Applications

- ▶ Quality assurance
- ▶ Component orientation
- ▶ Contamination protection
- ▶ Color differentiation

VIGI-Lux™ MVS 5000 TECHNICAL SPECIFICATIONS

Optical Specifications

	MVS 5000	MVS 5002	MVS 5000 UV
Spectral bandwidth ¹	400 - 1100+ nm	400 - 1100+ nm	300 - 400 nm
Flash rate	Up to 30 Hz	Up to 15 Hz	Up to 30 Hz
Light pulse duration ²	20 µseconds	30 µseconds	20 µseconds
Flash to flash variation	< 5%	< 5%	< 5%
Flashlamp life ³	10 ⁸ flashes	10 ⁸ flashes	10 ⁸ flashes

¹ Spectral bandwidth may be extended into the ultraviolet with other enclosure window materials.

² Measured at 1/3 of peak value.

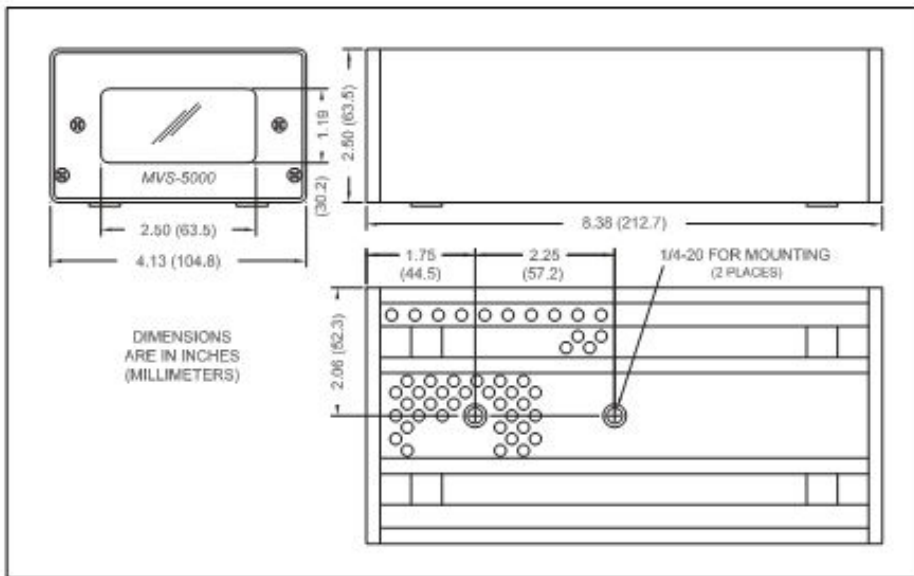
³ Prior to light output decreasing to 50% of the initial value.

Electrical Specifications

	MVS 5000	MVS 5002
Input voltage	11 to 15 VDC	11 to 15 VDC
Input current	4.5 A @ 12V (30 Hz)	4.5 A @ 12V (30 Hz)
Flashlamp voltage	600 V	600 V
Discharge capacitor	8 µF	16 µF
Discharge energy	1.4 J	2.8 J
Discharge power	43 W @ 30 Hz	43 W @ 15 Hz
Trigger	+5 V TTL pulse into opto-isolator with 150Ω nominal series resistor	
Pulse duration	10 - 100 µseconds	

Delay between flash command and light output is 8 µseconds typical.

MECHANICAL SPECIFICATIONS



*All values are nominal; specifications subject to change without notice.

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