MVS-5000™ Series
Machine Vision Strobe

The MVS-5000™ Machine Vision strobe from Excelitas is ideal for a variety of applications including quality assurance and motion detection.

Key Features

- Flash rates to 60 HZ
- Long life Xenon flashlamp
- Uniform illumination
- Compact / Lightweight
- Low cost
- Optically isolated trigger input
- Reduced EMI
- CE Certified

Applications

- Quality assurance
- Contamination protection
- Motion detection
- Part inspection

Description

The MVS-5000™ Machine Vision strobe from Excelitas Technologies produces short duration, high intensity light pulses for machine vision applications.

The Xenon flashlamp in the MVS-5000 produces intense pulses of radiant energy covering the full 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 MVS-5000 is a DC powered unit. The linear Xenon flashlamp is packaged in a metal enclosure with a fan for cooling. The 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.

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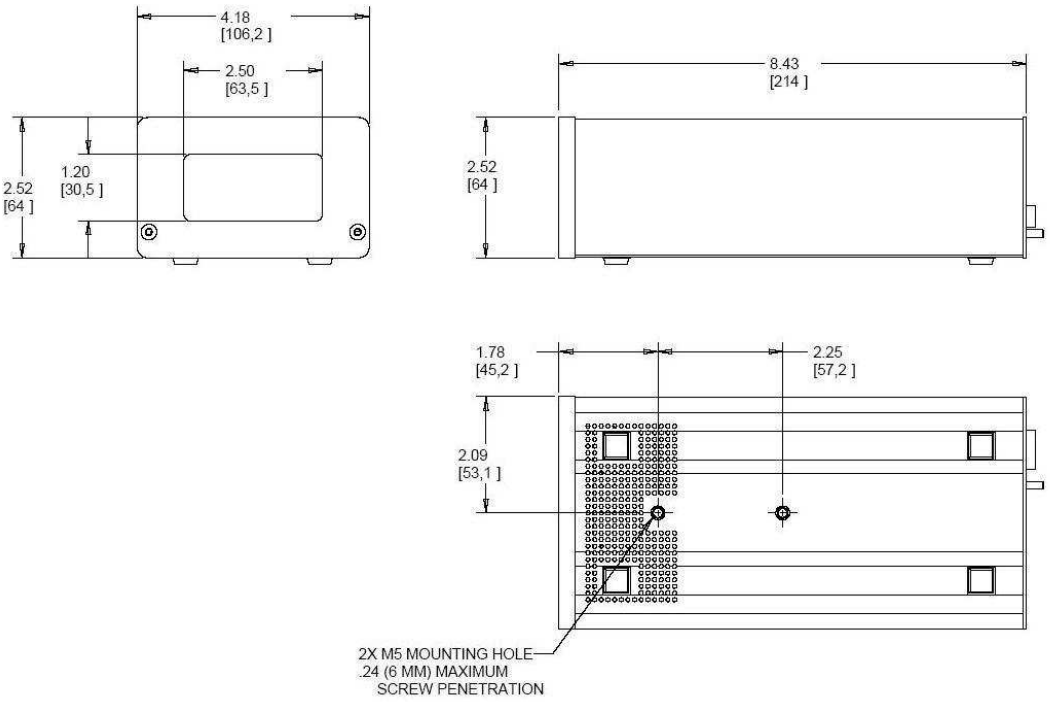

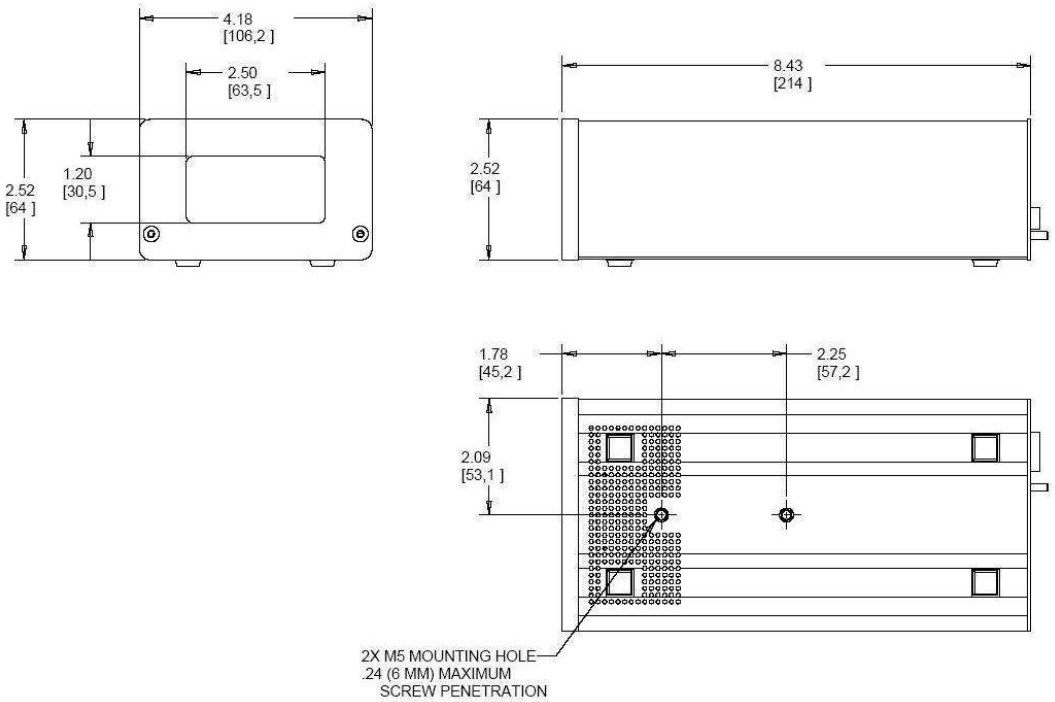

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MVS-5000 Series

Machine Vision Strobe

TABLE 1 Optical Specifications

MVS 5770-01	Narrow Beam	Wide Beam
Maximum flash rate (2)	1 Hz	1 Hz
Optical output at 1m	1mJ/cm^2	0.4mJ
Vertical beam spread (3)	8°	25°
Horizontal beam spread (3)	75°	75°
Spectral bandwidth (4)	780 – 1100 mm	780 – > 1100mm
Pulse duration (5)	200 µsec	200 µsec
Flash to flash stability	±10%	±10%

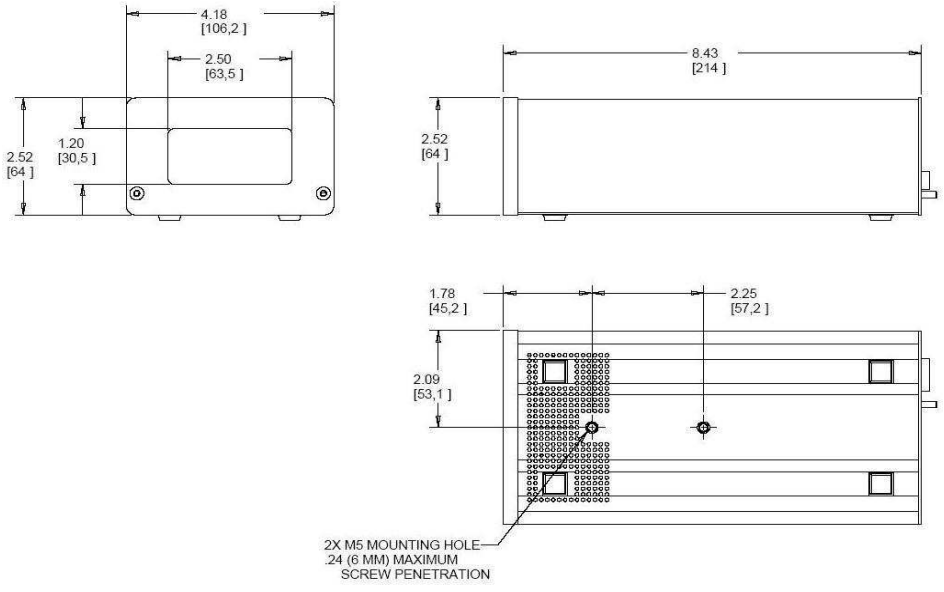
TABLE 2 Electrical Specifications

MVS 5770-01	Wide Beam	Narrow Beam
Input voltage	90 – 230 VAC (±10%), 50/60 Hz	90 – 230 VAC (±10%), 50/60 Hz
Input energy per flash (2)	50 J	50 J
Average power	50 W	50 W
Discharge capacitor	100 µF	100 µF
Input current (rms)	< 3 A	< 3 A
Flashlamp voltage (6)	600 – 1000 VDC	600 – 1000 VDC
Remote intensity control	4 – 6.7 VDC (Vlamp = 150 x Vref)	4 – 6.7 VDC (Vlamp = 150 x Vref)
Trigger input	+5V / 25mA, 10 – 100 µsec pulse into 4N36 opto-isolator with internal 150Ω resistor	+5V / 25mA, 10 – 100 µsec pulse into 4N36 opto-isolator with internal 150Ω resistor

TABLE 3 Environmental Specifications

Operating temperature	-10 - +110°F (-23 - +43°C)
Storage temperature	-40 - +194°F (-40 - +90°C)

Note 1: All values are nominal and subject to change without notice.
Note 2: Higher flash rates are available at lower flash energies.
Note 3: Measured at 50% points of peak intensity.
Note 4: Bandwidth depends on filter used; typical Xenon spectrum is 250-1100 + nm.
Note 5: Measured at 1/3 of peak.
Note 6: Factory set at 1000 VDC.



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About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection, energetic, frequency standards and high-reliability power needs of OEM customers.

From aerospace and defense applications to industrial, safety and security, medical lighting, analytical instrumentation, and clinical diagnostics, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

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