

MVS-5000

Machine Vision Strobe



Description

The PerkinElmer MVS 5000 Machine Vision Strobe produces short duration, high intensity light pulses for industrial vision applications. When operated in conjunction with a CCD/CID solid state video camera, the unit front or backlights objects, freezes motion and eliminates blur, thus enhancing image quality.

The 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

- Compact
- Light weight
- 12 VDC input
- Optically isolated trigger input
- Long life xenon flashlamp
- Flash rates to 30 Hz
- Uniform illumination
- Reduced EMI

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Optical Specifications

Spectral bandwidth (1)	300 to 1100+ nm
Flash rate	30 Hz maximum
Flashlamp life (3)	>10 ⁸ flashes
Flash duration (2)	20 microseconds
Flash to flash variation	< 5%

Illumination Characteristics

Distance	Area Illuminated	Photometric	Radiometric
1 foot	14.25 in. x 13 in.	60 lux-sec	4.90 x 10 ⁻⁵ J/cm ²
2 feet	29 in. x 28 in.	16 lux-sec	1.33 x 10 ⁻⁵ J/cm ²
3 feet	37.5 in. x 36.5 in.	7 lux-sec	5.5 x 10 ⁻⁶ J/cm ²

- Note 1: Spectral bandwidth may be extended into the ultraviolet with other enclosure window materials.
 Note 2: Measured at 1/3 of peak value.
 Note 3: Prior to light output decreasing to 50% of the initial value.
 Note 4: Area where energy is not less than 50% of maximum.
 Note 5: Variations available: MVS 5002: 2.9 J at 15 Hz max and MVS 5004: .75 J at 60 Hz max

Electrical Specifications

Input voltage	11-15 VDC
Input current	4.5 amps at 12 V (30Hz)
Flashlamp voltage	600 volts
Discharge capacitor	8 microfarads
Discharge energy	1.4 Joules
Discharge power	43 watts at 30 Hz
Trigger input: (1)	
Trigger	+5 volt pulse into opto-isolator with 150 ohm nominal series resistor
Pulse duration	10 to 100 microseconds

Note 1: Delay between flash command and light output is 8 microseconds typical

Mechanical Specifications

