

MVS-4100, 4200

Machine Vision Strobe



Description

The PerkinElmer Optoelectronics MVS 4100 and MVS 4200 are cost-effective strobes for a wide variety of industrial inspection applications. The linear xenon flashlamp, mounted in a reflector for maximum intensity, provides 6 microsecond pulses at flash rates up to 100 Hz. The energy-per-flash remains constant at 180 mJ; no range-switching is needed.

These 20 Watt strobes are housed in a convection-cooled, rugged enclosure. Threaded hoses at the bottom of the enclosure allow the unit to be hard mounted.

The MVS 4100 has an optically isolated trigger input and requires an external +5V TTL pulse to flash. The MVS 4200 has an internal oscillator and can be run in either external or internal trigger mode. The MVS 4200 is ideal as a stand-alone unit for “stroboscopic” applications.

Features

- Low cost
- Compact/light weight
- Universal AC input (90–230 VAC, 560/60 Hz)
- Long life xenon flashlamp
- Flash rates to 100 Hz
- Pulse duration 6 μ sec
- Internal/external trigger
- Convection cooled

MVS-4100, 4200

Optical Specifications

Spectral bandwidth (1)	300 to 1100+ nm
Flash rate	Up to 100 Hz (6,000 fpm)
Flashlamp life (3)	>10 ⁸ flashes
Flash duration (2)	6 microseconds
Flash to flash variation	< 5%

Illumination Characteristics

Distance	Area Illuminated	Photometric	Radiometric
6 inches	6 in. x 8 in.	19 lux-sec	15 x 10 ⁻⁶ J/cm ²
1 foot	12 in. x 16 in.	5.7 lux-sec	4.5 x 10 ⁻⁶ J/cm ²
2 feet	20 in. x 23 in.	1.5 lux-sec	1.2 x 10 ⁻⁶ J/cm ²
3 feet	36 in. x 48 in.	0.6 lux-sec	0.5 x 10 ⁻⁶ J/cm ²

- Note 1: Spectral bandwidth may be extended into the ultraviolet with other flashlamp envelope and enclosure window materials. Contact factory for IR or UV filters.
- Note 2: Measured at 1/3 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: Lux-sec = Lumen-sec/m².
- Note 6: Delay between flash command and light output is 8 μsec typical.

Electrical Specifications

Input voltage	90 - 230 ±10% VAC, 50/60 Hz
Input current	2.0 amps maximum
Flashlamp voltage	600 volts
Discharge capacitor	1.0 microfarad ± 10%
Discharge energy	0.18 Joules (± 10%)
Discharge power	20 watts maximum
Trigger input: (1)	
Trigger	+5 volt pulse into opto-isolator with 150 ohm nominal series resistor
Pulse duration	10 to 100 microseconds
Internal oscillator	10 - 100 Hz (10 turn potentiometer) (MVS-4200 only)

Physical Specifications

