

MVS-4000

Machine Vision Strobe



Description

The PerkinElmer MVS 4000 Mini Strobe produces high intensity, short duration light pulses for industrial vision applications. Operated in conjunction with a CCD/CID solid state video camera, this unit front-lights or back-lights objects, freezes motion, and eliminates blur, thus enhancing image quality.

The MVS 4000 operates from an input voltage of 12 VDC. The trigger input circuit is optically isolated, requiring a 5 volt pulse to flash. The metal enclosure contains a printed circuit module, a 0.75 inch arc quartz flashlamp, and reflector. Inputs are made via a 9-pin connector located on the rear of the strobe.

Features

- Flash Rates to 50 Hz
- 6 Microsecond Flash Duration
- Small/Light Weight
- Simple Installation and Operation

MVS-4000 Mini Strobe

Optical Specifications

| | |
|--------------------------|--------------------------|
| Spectral bandwidth (1) | 300 to 1100+ nm |
| Flash rate | 50 Hz maximum |
| 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 by using other flashlamp envelope and enclosure window materials.
 Note 2: Measured at 1/3 of peak value.
 Note 3: Prior to light output decreasing to 70% of the initial value.
 Note 4: Lux-sec - Lumen sec/m²

Physical Specifications

| | |
|----------|--|
| Size | Inches (millimeters) 5.20 (132) L x 3.06 (78) W x 2.00 (51) H |
| Weight | 0.75 lbs (0.34 kg) |
| Mounting | 1/4-20 threaded socket in base Provision for internal optical filter included |

Electrical Specifications

| | |
|---------------------|---|
| Input voltage | 11-15 VDC |
| Input current | 1.10 amps maximum |
| Flashlamp voltage | 600 volts ± 3% |
| Discharge capacitor | 1.0 microfarad ± 10% |
| Discharge energy | 0.18 Joules (± 10%) |
| Discharge power | 10 watts maximum |
| Trigger input: (1) | |
| Trigger | +5 volt pulse into opto-isolator with 150 ohm nominal series resistor |
| Pulse duration | 10 to 100 microseconds |
| Input connector | 9 pin "D" subminiature; mating connector provided |

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

Mechanical Specifications

