

MVS-3000 Series

Machine Vision Strobes



Description

The PerkinElmer MVS 3001 (AC) and 3008 (DC) Machine Vision Strobe systems produce short duration, high intensity light pulses for industrial vision applications. These systems consist of an enclosure housing, power supply and trigger module, and a flashlamp. The flashlamp is connected to the power supply through high voltage connectors.

These systems are particularly useful when conventional fiber optic or structured lighting systems cannot provide sufficient illumination for a particular area. The MVS 3001 and 3008 drive linear and ring flashlamps. With an appropriate reflector and a linear flashlamp, illumination is increased and light can be projected to a specified area. A ring flashlamp can be positioned around the lens assembly of a CCD camera in a production inspection system, thereby allowing the camera to be located closer to the object plane.

Features

- Operates both ring and linear flashlamps
- Flash rates up to 60 Hz
- Long lamp life
- Optically isolated trigger
- 60 watts output power

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Optical Specifications (1)

Spectral bandwidth (1)	200 to 1100+ nm
Flash rate	60 Hz maximum
Flashlamp life (3)	>10 ⁷ flashes
Flash duration (2)	44 microseconds with 2.5" diameter ring lamp typical
Energy input to flashlamp	1 joule (2 microfarads at 1kiloVolt)

Note 1: Spectral bandwidth may be extended into the ultraviolet by using other flashlamp envelope materials.

Note 2: Measured at 1/3 of peak value.

Note 3: Prior to light output decreasing to 70% of the initial value.

Environmental Specifications

Operating temperature	-10 to +110°C (-23 to +43°F)
Storage temperature	-40 to +194°C (-40 to +90°F)
Shock and vibration	1.5 g, 5 to 20 Hz per MIL-STD 810C

Electrical Specifications

Type	MVS-3001	MVS-3008
Line input voltage	115/230 ±10% VAC 50/60 Hz (1)	15 to 28 VDC
Input current	1.2 amps maximum (115 VAC)	4 amps peak at 24 VDC
Output voltage (1)	1000 volts factory set	1000 volts factory set
Output power (2)	60 watts maximum	60 watts maximum
Reference voltage (3)	+5 volt pulse into opto-isolator with 150 ohm nominal series resistor	
Trigger input: (4)	10 to 100 microseconds	
Trigger		
Pulse duration	3 to 10VDC	2 to 10 VDC

Note 1: Factory set at 115 VAC

Note 2: Output voltage may be adjusted using an external voltage reference source. MVS 3001, 150 volts per volt of reference. MVS 3008, 100 volts per volt of reference.

Note 3: Delay between flash command and light output is 8 microseconds typical.

Mechanical Specifications

