

Fiber Optic Vision Strobes by Excelitas CX-Strobe™ Series



Overview

Excelitas' CX-Strobe™ fiber optic Vision and Illumination System produce maximum light output with a wide range of flash rates. They offer high output, long life and superior reliability. The CX-Strobe incorporates our latest innovations in Xenon flashlamp technology, power supply engineering, trigger performance, and reflector design. The CX-Strobe is housed in a closed, powder coated aluminum enclosure for operation in harsh, demanding environments.

The Xenon flashlamp produces intense pulses of radiant energy covering the ultraviolet (UV), visible (VIS) and near infrared (NIR). When coupled with a CCD-CID camera system, the

strobe freezes motion which eliminates blur and enhances image quality. Several variations of the CX-Strobe are available, each optimized for maximum light output within a range of flash rates. External signal inputs allow you to further customize the strobe to your application.

The CX-Strobe Series is designed to the latest European CE Directives for safety and emission. The universal AC power supply recognizes AC voltage from 100 V to 240 V with line frequencies from 50-60 Hz. Easy installation of the Xenon flashlamp allows easy and quick lamp replacement. Various nose pieces and adapters are available in sizes up to 1 inch diameter to fit with the most common fiber optic bundles.

Features and Benefits

- ▶ Long life Xenon flashlamp: >10⁸
- ▶ High Intensity full spectrum light
 - ▶ Closed, powder-coated aluminum enclosure
- ▶ Improved stability
- ▶ Universal AC input (100-240 VAC)
- ▶ CE certified
- ▶ Configured for various fiber optic light guides
- ▶ Inputs for external trigger and intensity control
- ▶ Easy and quick lamp replacement

Applications

- ▶ Motion sensing
- ▶ Sorting
- ▶ Part recognition
- ▶ Industrial counting

CX-Strobe™ TECHNICAL SPECIFICATIONS

Optical Specifications

CX-Strobe	CX-1500	CX-1200	CX-400
Maximum flash rate ¹	15 Hz (0 - 35 Hz)	20 Hz (0 - 45 Hz)	60 Hz (0 - 135 Hz)
Input energy per flash ²	1.2 J - 2.7 J	1.0 - 2.2 J	0.3 - 0.7 J
Light output flash duration ³	8 - 10 µsec	8 - 10 µsec	8 - 10 µsec
Photometric light output ⁴	34 lumen-sec	31 lumen-sec	12 lumen-sec
Photometric light output ⁵	22 lumen-sec	19 lumen-sec	8.5 lumen-sec
Photometric light output ⁶	9.3 lumen-sec	8.5 lumen-sec	4.2 lumen-sec
Radiometric light output ⁴	265 mJ	225 mJ	90 mJ
Radiometric light output ⁵	165 mJ	145 mJ	60 mJ
Radiometric light output ⁶	73 mJ	65 mJ	30 mJ
Spectral bandwidth	250 - 1100+ nm	250 - 1100+ nm	250 - 1100+ nm
Flashlamp life ⁷	> 10 ⁸	> 10 ⁸	> 2 x 10 ⁸
Discharge Capacitance	15 µF	12 µF	4 µF

High intensity may cause damage to plastic fiber optic light guides. Contact the fiber manufacturer for temperature limits.

Electrical Specifications

Input voltage	100 - 240 VAC (±10%), 50 - 60 Hz
Maximum output power	43 W
Input current (rms)	1.5 A @ 115 VAC
Flashlamp voltage ⁸	400 - 600 VDC
Remote intensity control ⁹	4 - 6 VDC (Vref: Vlamp = 1:100)
External trigger input ¹⁰	+5 V TTL pulse, 20 mA, 10 - 100 µsec

All Values are nominal; specifications subject to change without notice.

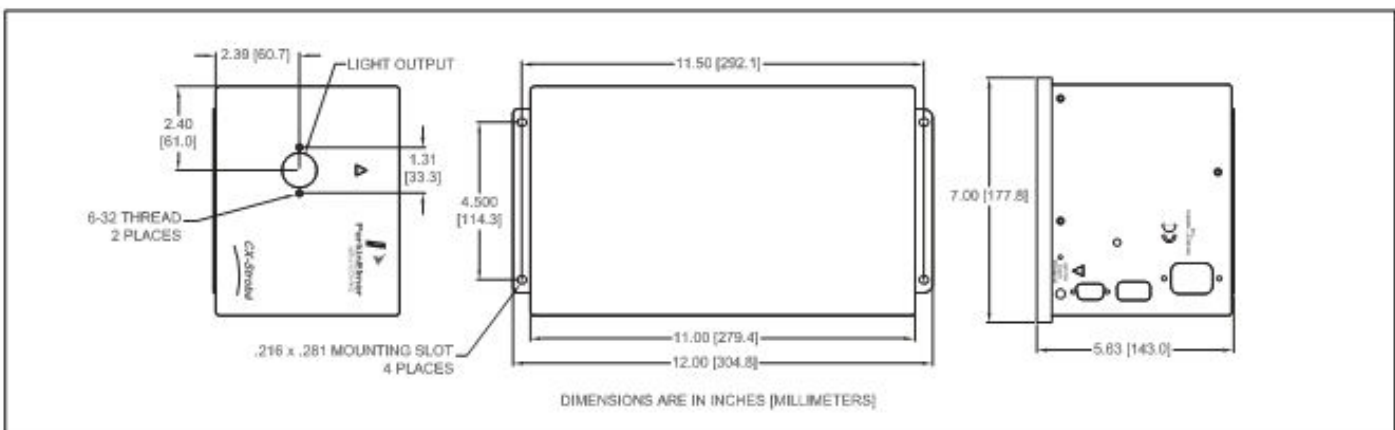
- Maximum flash rate at 600 VDC; the numbers in parenthesis represent the range of flash rates at adjusted lamp voltage (400 - 600 VDC).
Flash rate = $43/E$ where energy per flash, $E = 1/2$ Capacitance x Voltage² ($E = 1/2 CV^2$).
- Energy at 400 - 600 VDC.
- Approximate values measured at $1/3$ peak of light pulse.

Environmental Specifications

Operating temperature	0 to +40° C (32 to +104° F)
Storage temperature	-40 to +90° C (-40 to +194° F)

- Approximate light output at 600 VDC into 0.9 inches (23mm) diameter fiber optic light guide. Numerical aperture 0.5.
- Approximate light output at 600 VDC into 0.5 inches (13mm) fiber optic light guide.
- Approximate light output at 600 VDC into 0.27 inches (7mm) fiber optic light guide.
- Maintaining > 70% light output.
- Increasing lamp voltage will reduce lamp life.
- Also available Vref:Vlamp = 1:60.
- Delay between flash command and light output is 8 µsec typical. Optional fiber optic nose pieces: Fostec 0.72 inches ID (MVS 23), Volpi 0.59 inches ID (MVS 24), or Dolan Jenner 1.0 inch ID (MVS 25).

MECHANICAL SPECIFICATIONS



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