VacCam
In-Vacuum Video Camera

Introduction

VacCam was developed in response to frequent requests from customers seeking an in-situ vacuum video camera to internally monitor operations and processes occurring inside the vacuum chamber. It has been designed with vacuum-compatible construction to ensure low outgassing and avoid contamination of your in-vacuum processes or experiments.


The video camera system accepts C-mount lenses and XCAM offers a small selection of vacuum-compatible optical lenses for use with the camera or customers can provide their own. The camera includes integrated LEDs to provide illumination within the vacuum environment.

The camera has mounting points which must be connected to a heat-dissipative mounting block to removed the thermal heat generated.

The camera has a USB2.0 interface for power and communications and comes complete with fully featured application software and software developer's pack for customer integration.

- Fully-immersible in a vacuum chamber
- Fully vacuum compatible down to 10^{-6} mbar
- RGB colour or B&W greyscale imaging, two resolution options
- Video frame rates of up to 10 fps
- USB2 interface provides communications and power
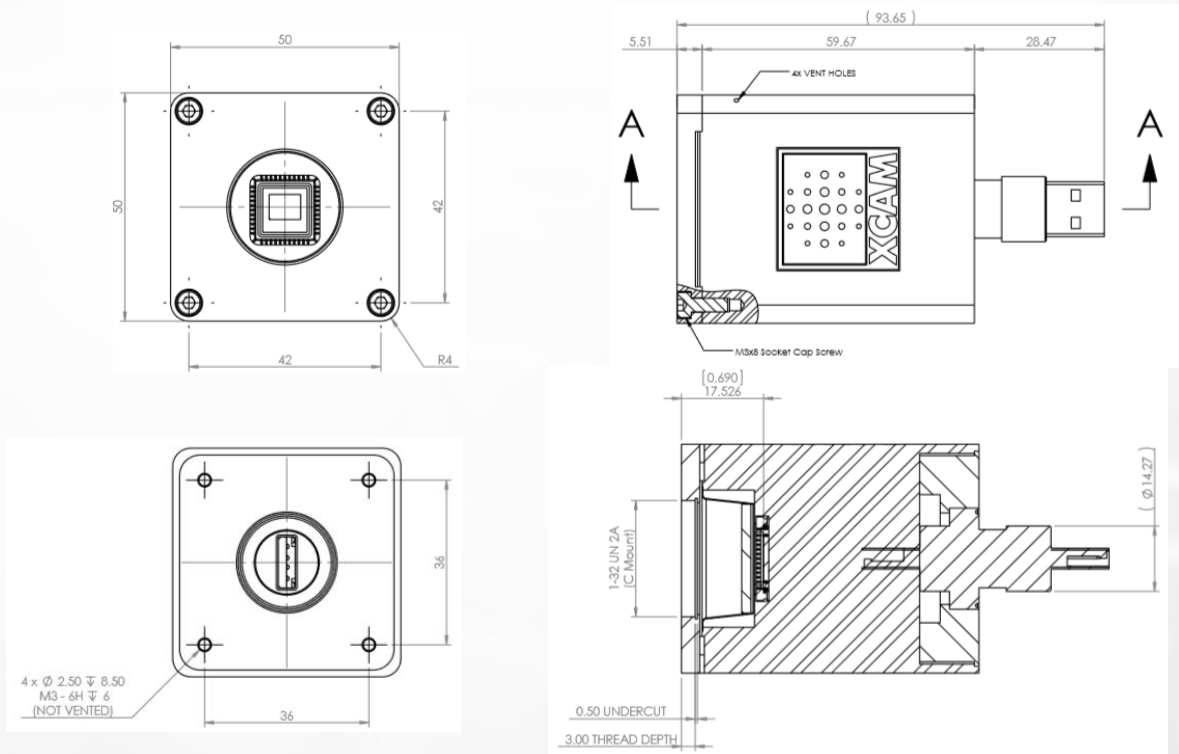- Fully featured application software
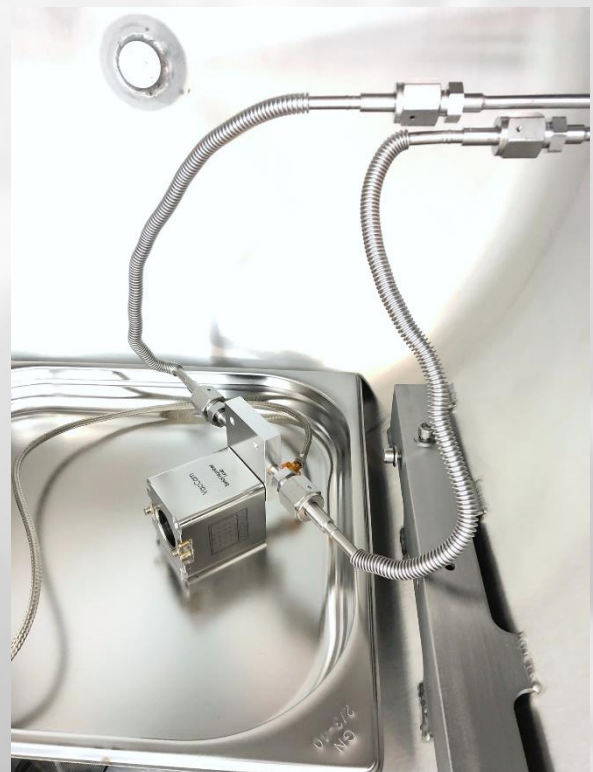
VacCam in vacuum environment with integrated thermal solution

VaCam
In-Vacuum Video Camera

Technical Drawings

Specifications

Mechanical dimensions	50 x 50 x 60 mm^3 (excl. lens and USB connector)
Image sensor options	1.3 MP CMOS: 1/1.8" format: 5.5 µm pixels: RGB or B&W
Lens	C-mount interface. Wide-angle lens with fixed focus as standard
Wavelength range	400 – 1000 nm
Exposure	Auto or fixed
Readout modes	Single image and up to 10 fps video
Electrical Interface	USB 2.0
Power	Supplied by USB 2.0: 1.5 W max.

Supplied by XCAM

- In-vacuum video camera
- Lens (ordered separately by part number)
- Operating manual
- Software dll and application software to enable image capture and integration with user's software application

Supplied by Customer

- USB vacuum feedthrough (XCAM to advise)
- USB2 in-vacuum cable
- Mounting system inside the vacuum capable of sinking and dissipating up to 2W heat load
- Additional illumination inside vacuum chamber (if required)