

# USB uEye<sup>®</sup> ML

Compact and cost-efficient camera for apparatus  
and mechanical engineering



**IDS:**

## USB uEye ML – Compact and cost-efficient

The new USB 2.0 ML camera is compact, extremely robust, yet lightweight. The camera is particularly suited for space limited applications, e.g. in embedded systems and apparatus engineering.

The USB uEye ML also features a lockable USB 2.0 connector and metal casing, which ensure secure operation even in extremely harsh industrial environments, e.g. metal processing, robotics, electrical and medical engineering. In addition, an 8-pin Hirose connector (HR25), offering two GPIOs and optically decoupled trigger and flash I/Os, adds further hardware features.

### Main hardware features:

- USB 2.0 interface: available at every PC, offering plug & play
- Power supply via USB bus
- Compact size
- Weights only 37 g
- Opto-decoupled I/Os for trigger and strobe
- 2 General Purpose I/Os
- Extremely low power consumption



■ Made  
■ in  
■ Germany



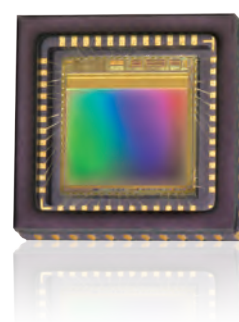
### Outstanding sensor features:

- Modern e2v CMOS sensors offering CCD image quality
- NIR (near-infrared) version with outstanding performance at 850 nm
- Wide-angle optical 1/1.8" sensor format
- Suitable for a great range of applications, thanks to four shutter modes
- Log-mode for capturing excellent images even in high dynamic scenes
- Multiple areas of interest (AOIs) to capture up to four features simultaneously
- Sequence-AOI to capture images with different parameters
- Linescan-mode

### Sensor

The UI-1240ML is fitted with the modern and sophisticated 1.3 megapixel CMOS sensor from e2v which offers outstanding sensitivity and is available in color, mono and NIR versions. The camera is particularly suited for applications in ITS, quality control, microscopy, medical engineering or machine vision.

The sensor delivers 25 fps at full resolution in addition to a great range of features, including Log-mode, Linescan-mode, multiple AOI, sequence AOI and four shutter-modes.



## Sensor features

### Best image quality for all applications

e2v's EV76C560/EV76C661 is the first sensor to offer four shutter modes and to switch during between individual modes whilst the camera is in operation. As a result, the sensor offers greatest flexibility if requirements change and is also suited for a broad range of applications: e.g. in ITS, barcode- and OCR recognition and medical engineering. The efficient shutter modes guarantee ideal quantum efficiency and hence excellent image quality. With four shutter modes to choose from, it's easy to adjust the shutter mode according to the signal-to-noise ratio for distortion-free images or in critical lighting situations.

### Log-mode



The sensor allows capturing highly dynamic scenes at best image quality even in difficult light conditions and global shutter mode thanks to its Log-mode feature. Log-mode parameters can easily be adjusted via uEye Cockpit to get the best setting according to the requirements of various situations. Hence, the sensor is the perfect replacement for costly HDR sensor solutions.

### Multiple Areas of interest (AOI)

Up to four AOIs can be captured simultaneously using the multiple AOI feature. This feature is perfect to capture multiple features at high frames rates, e.g. in bottle inspection.

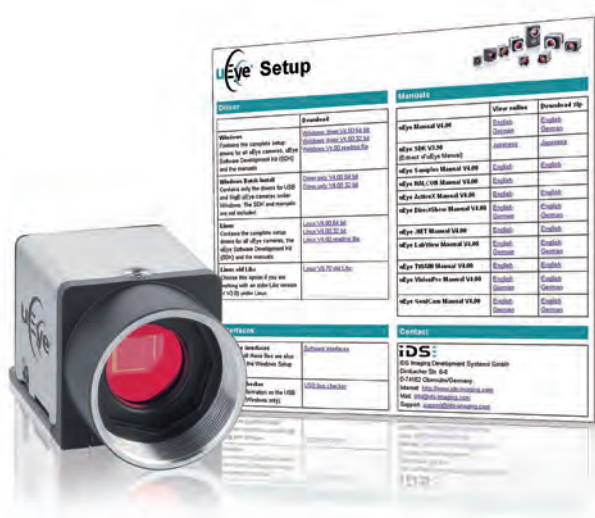
### Sequence-AOI

Different regions of interest can be captured successively with pre-defined parameters, including position, exposure time, gain and readout. The resulting image sequences can be summarized into one ideal image.

## The uEye software package: It's so easy

The well-known and sophisticated IDS software package offers driver versions for Windows and Linux as well as software interfaces, e.g. HALCON. Additionally, the IDS Camera Manager is the central administration tool for all IDS uEye cameras. The uEye Cockpit is the most comfortable tool to install and to set camera parameters. Without changing a single line of programming code, the software enables users to install the cameras easily as well as to determine the most ideal parameters for each image. This tool also allows adapting the exposure time, frame rate and trigger and flash settings.

As an added benefit one driver and one API (application programming interface) are enough to integrate and simultaneously operate USB 2.0, USB 3.0 and GigE cameras. Hence, no single line of programming code needs to be amended when changing camera interfaces. Firmware and driver updates are uploaded when initializing the cameras. Regular updates ensure that also cameras in the field benefit from highest functionality. This high level of interoperability and interchangeability of interfaces and hence customer benefit is only offered by IDS.



## Available models

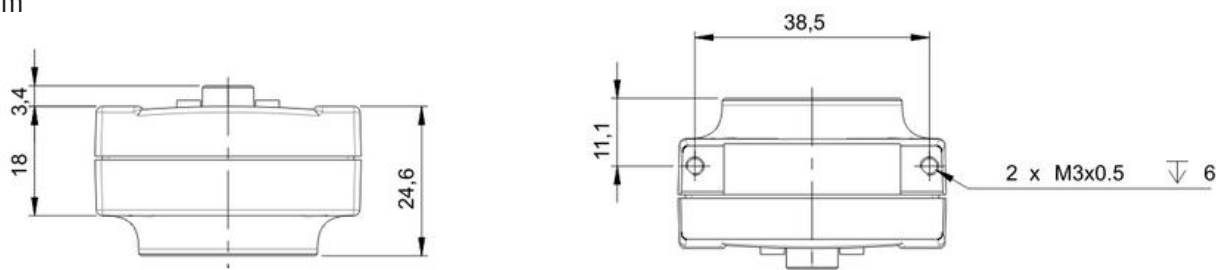
Model	Sensor
UI-1240ML-NIR	Near-infrared
UI-1240ML-C	Color
UI-1240ML-M	Monochrome

## Technical data

Interface	USB 2.0
Sensor	e2v CMOS sensor EV76C560/EV76C661
Resolution	1280 x 1024 pixel
Bit depth	10 bit
Shutter	Global/Rolling (switchable)
Max. frame rate (freerun)	25 fps
Digital I/Os	Trigger, Flash, 2 GPIOs
Size	H: 44.00 mm, W: 44.00 mm, D: 18 mm
Weight	37 g
Power supply	12 - 24 V
Power consumption	max. 686 mW

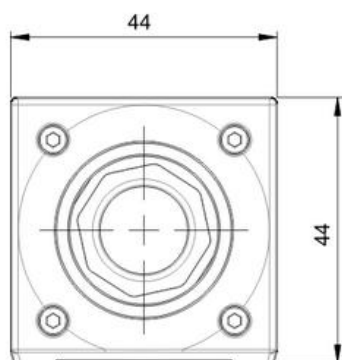
## Technical specification

Dimensions in mm

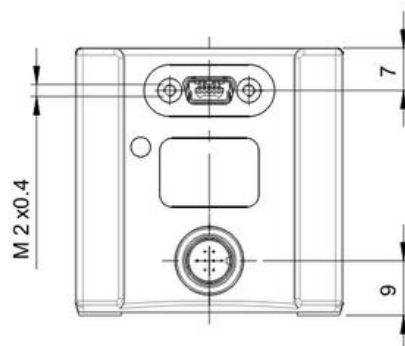


Top view

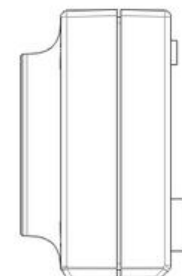
Bottom view



Front view



Back view



Side view