



### General

Model:	exo249CU3
Product code:	F001681
Product series:	EXO USB3
Status:	Available

### Sensor

Sensor type:	Area scan
Chroma:	Color
Spectrum:	Visible
Spectral range:	400 nm to 1000 nm
Resolution:	1,920 × 1,200 (2.30 MP)
Sensor model:	Sony IMX249
Sensor architecture (material):	cmos
Shutter type(s):	global-shutter
Sensor size:	11.25 × 7.03 mm (13.27 mm, 13.4mm (Type 1/1.2))
Pixel size:	5.86 μm × 5.86 μm

### Pixel formats

Sensor bit depth:	8-Bit,12-Bit,12-Bit
RGB pixel formats:	bayer8, bayer12packed

## Imaging performance

Dynamic range:	72 dB
SNR:	44 dB

## Timing and gain

Max. frame rate:	41 fps
Exposure time:	34 $\mu$ s to 60 s
Gain:	0.0 dB to 48.0 dB

## I/Os and power

Non-isolated lines:	0 x LVDS input, 0 x LVDS output, 0 x TTL input, 0 x TTL output, 2 x 24V input, 4 x Open drain output,
Specific non-isolated lines:	1 x RS232 input, 1 x RS232 output, 0 x RS422 input, 0 x RS422 output,
Opto-isolated lines:	1 x Optical isolated input, 0 x Optical isolated input,
Power supply:	10 to 25VDC
Power consumption:	External: 4.5 W (typical)

## Operating conditions

Operating temperature (housing):	-10 °C to 60 °C
----------------------------------	-----------------

## Mechanical properties

Body dimensions (L x W x H in mm):	43 × 50 × 50
Filter/protection glass:	IR-Cut - 680nm
IP class:	IP40
Lens mount(s):	C-Mount
Weight:	140 g

## On-board memory and FPGA

Image buffer (RAM):	192 MByte
Non-volatile memory (Flash):	32 MByte

## Interfaces

Digital interface:	usb3.0
Interface connector:	(Micro-B)

## FW features - image control

Exposure modes:	Manual, Auto, External
Gain modes:	Auto, Manual

## FW features - image control

White balance modes: auto, manual

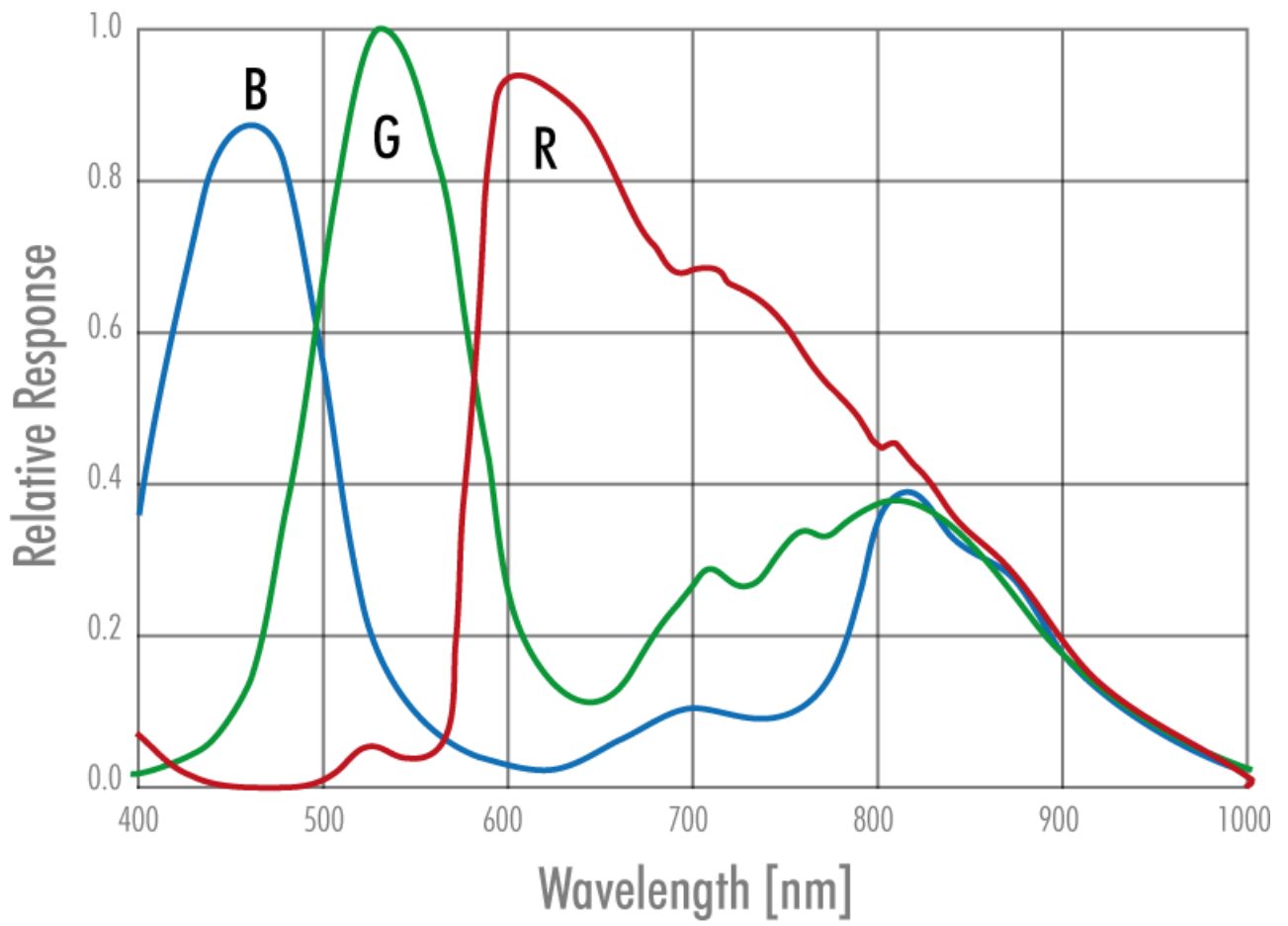
Image control features: FW Features - Image Control

## FW features - camera control

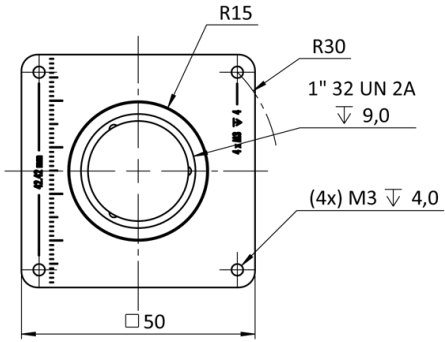
Trigger modes/sync: INTERNAL,SOFTWARE,EXTERNAL

Camera control features: User Sets, PWM(4), Sequencer,

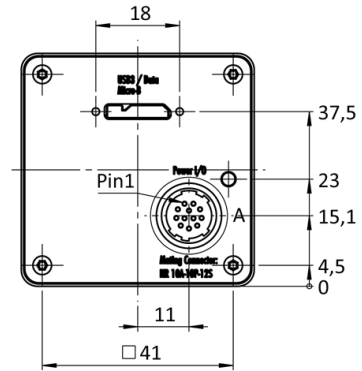
# Quantum Efficiency



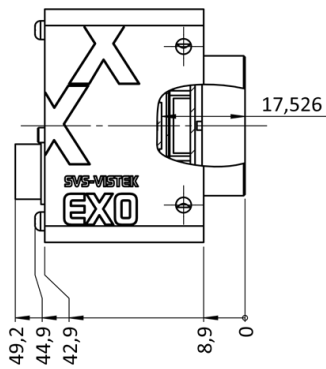
front



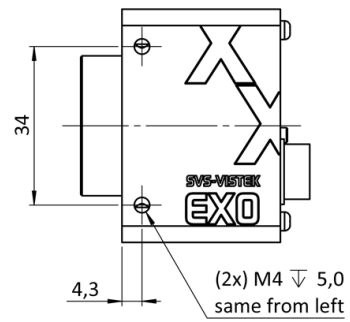
back



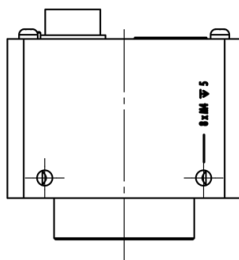
cross section



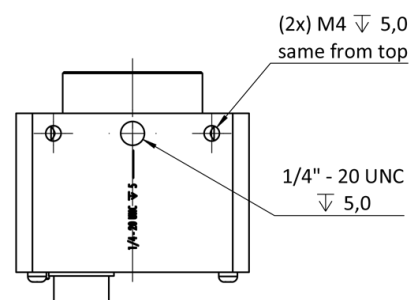
right side

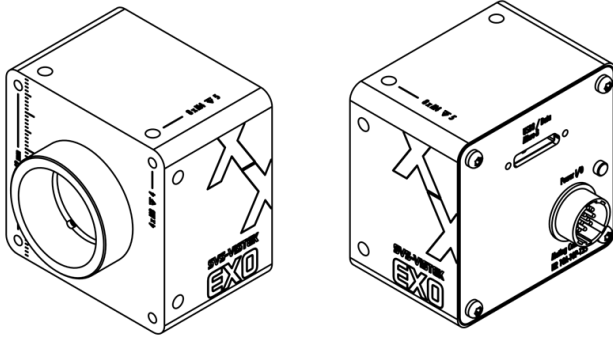


top



bottom





## I/O pin assignment



1	VIN - (GND)	7	OUT 1 (open drain)
2	VIN + (10 V to 25 V DC)	8	OUT 2 (open drain)
3	IN 4 (RXD RS232)	9	IN 3 + (opto In +)
4	OUT 4 (TXD RS232)	10	IN 3 - (opto In -)
5	IN 1 (0-24V)	11	OUT 3 (open drain)
6	IN 2 (0-24V)	12	OUT 0 (open drain)