

# exo253ZU3

Polarized



The Polarized cameras measure the degree of polarization and the planes of polarization from a single image. The high resolution with global shutter, the high optical dynamic and high frame rate allow detailed structural analysis of even moving objects.

The cameras are based on our fanless EXO industrial camera with milled aluminum body.

## Technical Highlights

- > LUT, ROI, Burst Mode
- > Electrical and optical inputs
- > Up to 60°C operating temperature
- > Integrated 4-channel strobe controller
- > Industrial TTL-24V I/O interface with SafeTrigger, logic functions, programmable sequencers and timers, RS232 interface

## SWIR / UV / Polarized Series exo253ZU3

Resolution [MP]	12.3 MP
Resolution (h x v)	4096 x 3000 px
Frame rate (max.)	30 fps
Chroma	mono polarized
Interface	USB3 Vision (Micro-B)

### Sensor

Sensor	IMX253MZR (polarized)
Manufacturer	Sony
Sensor type	Area CMOS
Shutter type	global shutter
Sensor size (h x v)	14.13 x 10.35 mm
Optical diagonal	17.52 mm
Sensor format	1.1 "
Pixel size (h x v)	3.45 x 3.45 $\mu\text{m}$

### Camera

Exposure modes	MANUAL;AUTO;EXTERNAL
Trigger modes	INTERNAL;SOFTWARE;EXTERNAL
Exposure time (min)	28 $\mu\text{s}$
Exposure time (max)	1 sec (external $\infty$ )
Pixel format / max	mono8, mono12packed / 12 bit
Gain modes / max	manual, auto / 48 dB
Internal memory	256 MB SDRAM, 32 MB Flash

### Feature Set

AOI	yes
LUT	yes
Offset	yes
Binning	yes
Image flip	yes
Shading correction	yes
Defect pixel correction	yes
Sequencer	yes

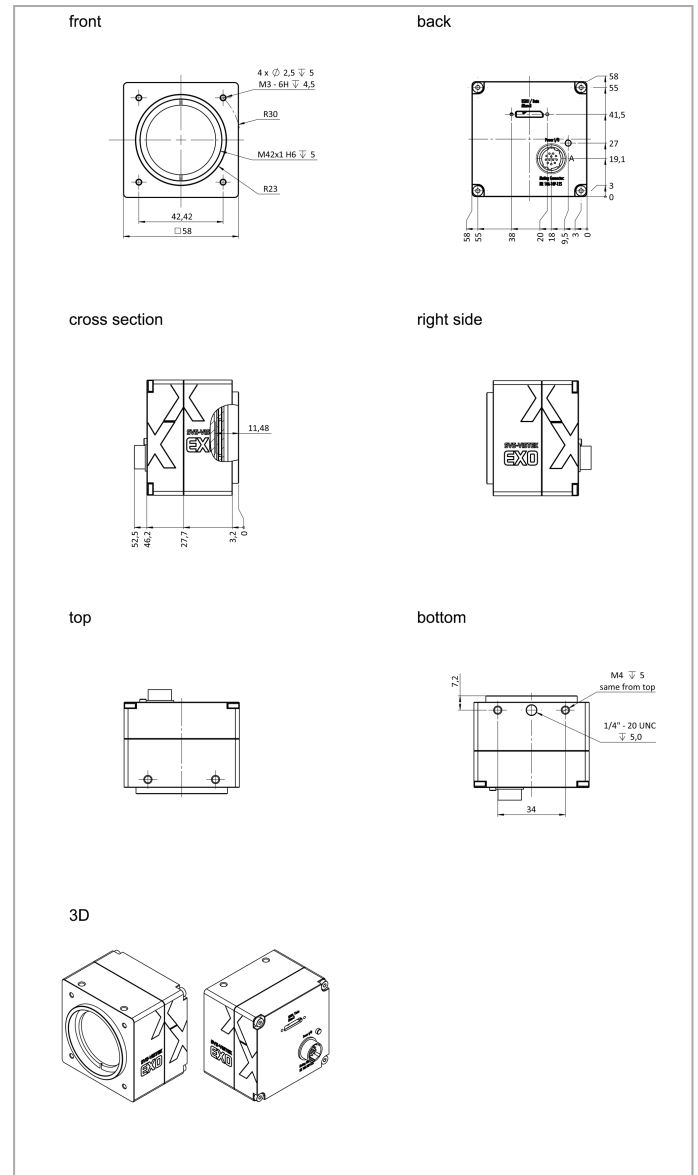
### Housing

Lens mount	C-Mount
Dimensions (w x h x d)	50 x 50 x 43 mm
Weight	138 g
Operating temperature (housing)	-10 to 60 $^{\circ}\text{C}$
Ambient humidity	10 to 90 % (non-condensing)
Protection class	IP40
Filter-/Coverglass	K9 - AR coating - 400-850nm

### I/O-Interfaces

Input up to 24V	2 x
Input OPTO	1 x
Output open drain	4 x
I/O RS-232	1 x
Power supply	10 to 25 V (DC)
Power consumption	4.5 W (dep. on operating mode)

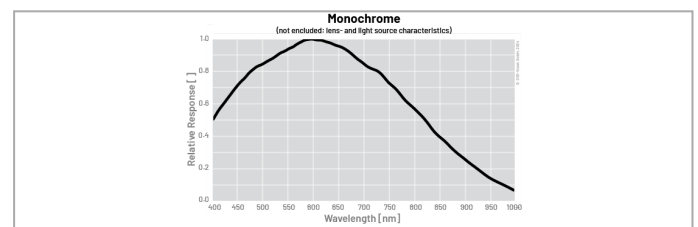
## Dimensions [mm]



## Pinout Mating Connector

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

## Spectral Response \*



\* Sensor data – excludes camera cover- or IR-cut filter characteristics

