

GO-5000M-USB-UV
5-megapixel CMOS global shutter

USB[™]
VISION



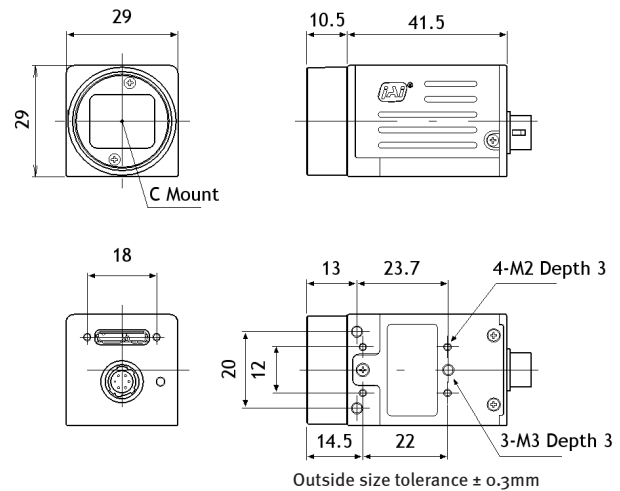
- *Large format 5 MP CMOS imager (global shutter) with extended UV sensitivity*
- *Up to 62 fps at full resolution*
- *5.0 μm square pixels in a 5:4 aspect ratio*
- *Small size (29 x 29 x 41.5 mm, excluding lens mount)*
- *8/10/12-bit monochrome output*
- *60 dB linear dynamic range with built-in HDR modes up to 100 dB*
- *Analog and digital gain control for less quantized noise in low-light situations*
- *Exposure control from 10 μs to 8 seconds in 1 μs steps*
- *2X and 4X binning for increased sensitivity*
- *Single and Multi-ROI modes for flexible windowing and use of 2/3" or smaller optics*
- *Automatic Level Control (ALC) for dynamic lighting conditions*
- *Accepts power over USB3 Vision interface or separate 6-pin connector*
- *C-mount lens mount*

Specifications for GO-5000M-USB-UV

Go Series

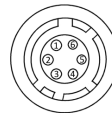
Specifications	GO-5000M-USB-UV
Sensor	1" CMOS global shutter (Lince5M) with no microlenses
Sensor protective covering	Quartz glass with double AR coating
Pixel clock	48 MHz
Frame rate, full frame	62 frames/sec. @ 8-bit
Active area	12.8 mm (h) x 10.2 mm (v), 16.39 mm diagonal
Cell size	5.0 μm (h) x 5.0 μm (v)
Active pixels	2560 (h) x 2048 (v)
Read-out modes	Full: 2560 (h) x 2048 (v) up to 62 fps ROI: Any start line, any height in 1-line steps, with X offset and width in 16-pixel steps Binning: 1x2, 2x1, 2x2, 2x4, 4x2, 4x4 (monochrome only)
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity	TBD p (λ = TBD nm)
Maximum SNR	TBD dB
Traditional SNR*	>55 dB (0 dB gain)
Video signal output	8/10/12-bit monochrome
Gain (digital)	Manual/automatic 0 dB to +24 dB
Gain (analog)	1x, 2x, 4x
Gamma	0.45, 0.6, 1.0 or 32-point LUT
Synchronization	Internal
Trigger input	Opto In, Pulse Generators, Software, User Output (NAND gates)
Trigger modes	EPS, Trigger Width, Timed RCT (with ALC), Sequence
Electronic shutter	Timed exposure: 10 μs to 8 sec in 1 μs steps Auto shutter: 1/62 to 1/10000 sec.
Auto Level Control (ALC)	Shutter range from 1/62 to 1/10000, gain range from 0 dB to +24 dB. Tracking speeds and max values adjustable.
High Dynamic Range function	4 built-in HDR slopes. Selectable up to -100 dB.
Pre-processing functions	Flat field correction, blemish compensation (256 pixels)
Operating temperature	-5°C to +45°C
Storage temperature	-25°C to +60°C
Humidity	20 – 80% non-condensing
Vibration	10 G (20Hz to 200Hz XYZ)
Shock	80 G
Regulations	CE (EN61000-6-2, EN61000-6-3), FCC Part 15 class B, RoHS/WEEE
Power	6-pin connector: 12V to 24V DC ± 10%. 2.8W typical @ 12V USB 3.0: 720mA, 3.6W typical @ 5V
Lens mount	C-mount
Dimensions (H x W x L)	29 mm x 29 mm x 41.5 mm (excl. lens mount)
Weight	46 g

Dimensions



Connector pin-out

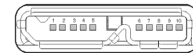
DC In / Trigger



HIROSE HR10A-7R-6PB(73)

Pin	Signal
1	+12V to +24V DC input
2	Opto In 1
3	Opto Out 1
4	Opto Out 2
5	Opto Common
6	GND

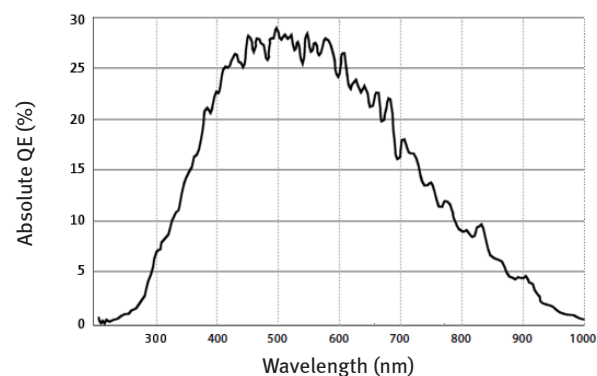
USB 3.0 Interface



Micro B type - ZX3600-B-10P or equiv.

No	I/O	Name	Note
1	I	VBUS IN	Power (VBUS)
2	I/O	DM	USB2.0 Differential pair (-)
3	I/O	DP	USB2.0 Differential pair (+)
4		OTG ID	USB OTG ID for identifying lines
5		GND	GND
6	O	FX3 SSTXM	USB3.0 Signal Transmission line (-)
7	O	FX3 SSTXP	USB3.0 Signal Transmission line (+)
8		GND	GND
9	I	FX3 SSRXP	USB3.0 Signal Receiving line (-)
10	I	FX3 SSRXM	USB3.0 Signal Receiving line (+)

Spectral Response



Ordering Information

GO-5000M-USB-UV | Monochrome UV camera with USB3 Vision

*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time. For a more complete description, see the manual.

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