

❖ **GO-5000-PGE**
5-megapixel CMOS global shutter



- **Large format 5 MP CMOS imager (global shutter)**
- **Up to 22 fps at full resolution**
- **5.0 μm square pixels**
- **Small size (29 x 29 x 41.5 mm, excluding lens mount)**
- **8/10/12-bit output in choice of monochrome or raw Bayer color models**
- **60 dB linear dynamic range with built-in HDR modes up to 84 dB (monochrome only)**
- **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 (monochrome only)**
- **Single and multi-ROI modes for flexible windowing and use of 2/3" or smaller optics**
- **Accepts power over GigE Vision interface or separate 6-pin connector**
- **C-mount lens mount**
- **Automatic Level Control (ALC) for dynamic lighting conditions**

Specifications for GO-5000-PGE

Go Series

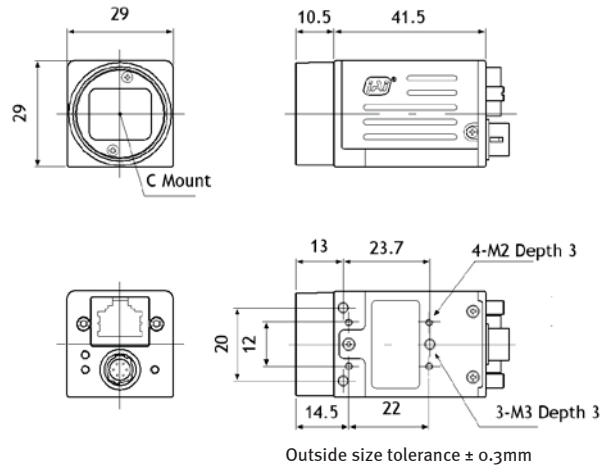
Specifications	GO-5000-PGE
Sensor	1" CMOS global shutter (Lince5M)
System clock	48 MHz (for pulse generator)
Frame rate, full frame	22 frames/sec. @ 8-bit
Active area	12.8 mm (h) x 10.2 mm (v), 16.39 mm diagonal
Cell size	5.0 μm (h) x 5.0 μm (v)
Active pixels	2560 (h) x 2048 (v)
Read-out modes	2560 (h) x 2048 (v) up to 22 fps
Full ROI (mono)	Any start line, any height in 1-line steps, with X offset and width in 8-pixel steps
ROI (color)	Any start line, any height in 2-line steps, with X offset and width in 8-pixel steps
Binning	1x2, 2x1, 2x2, 4x4 (monochrome only)
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity (mono)	20.17 p (λ = 525 nm)
Absolute sensitivity (color)	51.25 p (λ = 525 nm)
Maximum SNR (mono)	41.30 dB
Maximum SNR (color)	38.12 dB
Traditional SNR*	mono >55 dB (0 dB gain) color >53 dB (0 dB gain, green,)
Video signal output	8/10/12-bit monochrome 8/10/12-bit raw Bayer
Gain (digital)	Manual/automatic 0 dB to +24 dB
Gain (analog)	1x, 2x, 4x (mono or individual Bayer channels)
White balance (GO-5000C)	Manual, one-push auto, or continuous (3000K to 9000K)
Gamma	0.45, 0.6, 1.0 or 32-point LUT (16-pt. color)
Synchronization	Internal
Trigger input	Opto In, Pulse Generators, Software, User Output, Actions
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	1/22 to 1/100,000 sec.
Auto Level Control (ALC)	Shutter range from 1/22 to 1/100,000, 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 -84 dB (monochrome only).
Pre-processing functions	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 PoE	12V to 24V DC ± 10%. 2.5W typical @ 12V 35V to 57V DC. 3.19W typical @ 55V
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

Ordering Information

GO-5000M-PGE	Monochrome camera with GigE Vision
GO-5000C-PGE	Color camera with GigE 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.

Dimensions



Connector pin-out

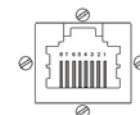
DC In / Trigger



HIROSE HR-10A-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

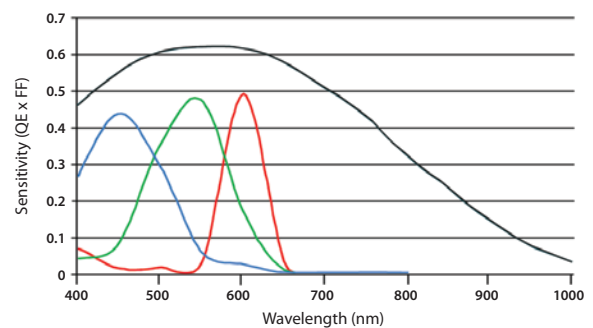
GigE Vision Interface



RJ-45 with locking screws

Pin	Signal
1	TRD+ (0)
2	TRD- (0)
3	TRD+ (1)
4	TRD+ (2)
5	TRD- (2)
6	TRD- (1)
7	TRD+ (3)
8	TRD- (3)

Spectral Response



Monochrome —
Red — Green — Blue —

Note: Color response includes IR-cut filter.

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