

## U3-3890SE-M-GL Rev.1.2 (AB12789)

### In series

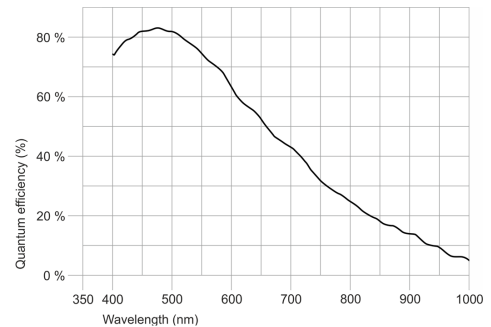
The model is in series and available for the long term.



## Specification

### Sensor

Sensor type	CMOS Mono
Shutter	Rolling shutter
Sensor characteristic	Linear
Readout mode	Progressive scan
Pixel Class	12 MP
Resolution	12.00 Mpix
Resolution (h x v)	4000 x 3000 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.8"
Optical Size	7.400 mm x 5.550 mm
Optical sensor diagonal	9.25 mm (1/1.73")
Pixel size	1.85 µm
Micro lens shift	0.00
Manufacturer	Sony
Sensor Model	IMX226CLJ-C
Gain (master/RGB)	17x/-
AOI horizontal	same frame rate
AOI vertical	same frame rate
AOI image width / step width	256 / 16
AOI image height / step width	1 / 1
AOI position grid (horizontal/vertical)	16 / 1
Binning horizontal	increased frame rate
Binning vertical	increased frame rate
Binning method	M/C automatic
Binning factor	2 / 4 / 8
Subsampling horizontal	same frame rate
Subsampling vertical	same frame rate
Subsampling method	M/C automatic
Subsampling factor	2, 4, 8



Subject to technical modifications (2023-12-14)

## Model

Frame rate freerun mode (in 8-bit mode)	33 fps
Frame rate trigger (continuous)	17 fps
Frame rate trigger (maximum)	17 fps
Exposure time (minimum - maximum)	0.040 ms - 609 ms
Long exposure (maximum)	30000 ms
Power consumption	2 W - 3.6 W
Image memory	128 MB

## Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

Device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Device temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

## Connectors

Interface connector	USB Type-C, screwable
I/O connector	8-pin Hirose connector (HR25-7TR-8PA(73))
Power supply	USB cable

## Pin assignment I/O connector

1	Ground (GND)
2	Flash output with optocoupler (-) - Line 1
3	General Purpose I/O (GPIO) 1, 3.3 V - Line 2
4	Trigger input with optocoupler (-) - Line 0
5	Flash output with optocoupler (+) - Line 1
6	General Purpose I/O (GPIO) 2, 3.3 V - Line 3
7	Trigger input with optocoupler (+) - Line 0
8	Output supply voltage, 5 V (100 mA)



## Design

Lens Mount	C-Mount
IP code	IP30
Dimensions H/W/L	34.0 mm x 44.0 mm x 47.0 mm
Mass	110 g

## Features

### Image Acquisition

Freerun	✓
Software trigger	✓
Hardware trigger	✓
Trigger controlled exposure	-
Denoisier	✓
Long exposure	✓
Line scan	-
Line scan highspeed	-
Global start	-

### Flashing

Flashing	✓
PWM flashing	✓

Image Adjustments

Auto exposure	✓
Auto gain	✓
Auto whitebalance	-
Color correction	-
Gamma	✓
LUT	✓
Mirror/flip	Y

On-board Image Processing

Pixel formats	Mono8 Mono10 Mono10p Mono12 Mono12p
Region of interest	✓
Decimation (FPGA)	✓
Decimation (Sensor)	-
Binning (FPGA)	✓
Binning (Sensor)	2x2 Color binning on monochrome sensor may cause image artifacts. Horizontal and vertical binning can only be applied jointly.

Others

Chunks	✓
Sequencer	-
Events	✓
Firmware update	✓
1st supported firmware version	2.20.17746