MV0-D1280-O01-144-G2

The camera series MV0-D1280(I)-O01-144-G2 is based on the ON Semiconductor PYTHON1300 CMOS image sensor

Features

- ON Semiconductor PYTHON1300 CMOS image sensor
- 1280 x 1024 pixel resolution
- Good NIR spectral response
- Suitable for standard and low light applications
- Up to 85fps @ full resolution
- Global shutter
- Available in monochrome, NIR and color
- Extended sensor and camera features
- Up to 10bit greyscale resolution
- Boardlevel and OEM solution available
- GigEVision interface (PoE)

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

Quantum Efficiency Image Sensor

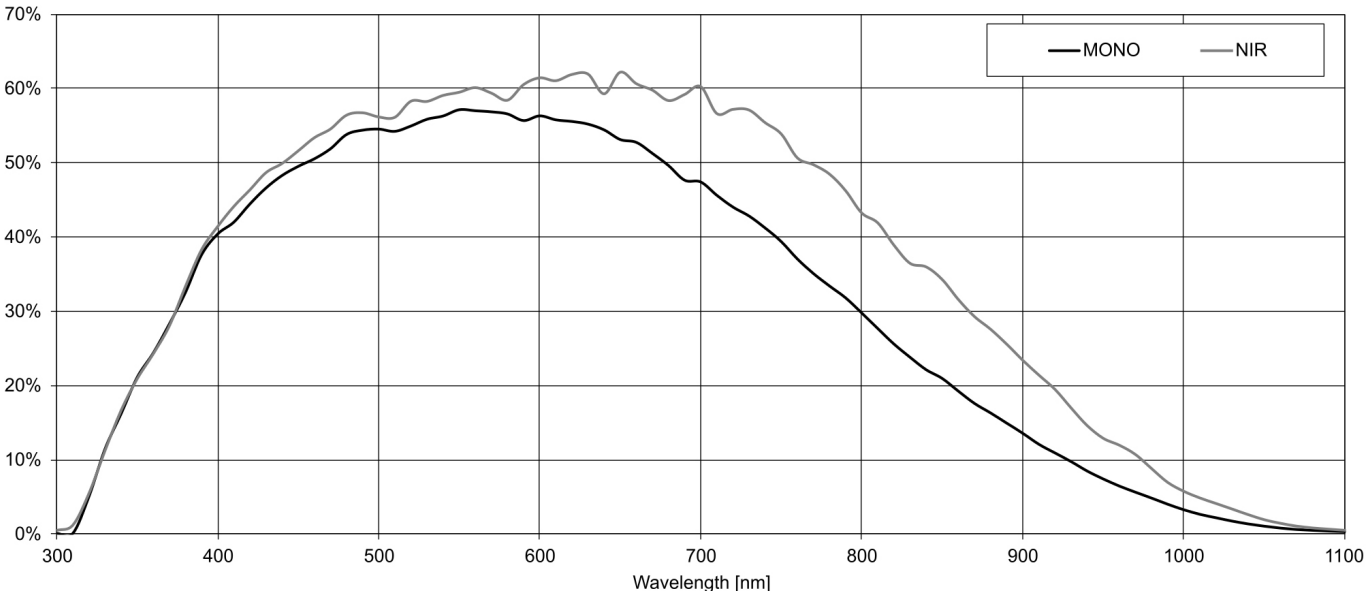


Image Sensor Specifications

Manufacturer / Type	ON Semiconductor, PYTHON1300
Technology	CMOS
Optical format	1/2"
Optical diagonal	7.87mm
Resolution	1280 x 1024
Pixel size	4.8µm x 4.8µm
Active optical area	6.14mm x 4.92mm
Dark current	5e-/s
Read out noise	9e-
Full well capacity / SNR	10ke- / 100:1
Spectral range	Monochrome: 330 to 930nm (to 10% of peak responsivity) NIR: 330 to 970nm (to 10% of peak responsivity)
Responsivity	Monochrome: 943 x 10^3 DN / (J/m^2) @ 540nm / 8bit NIR: 854 x 10^3 DN / (J/m^2) @ 850nm / 8bit
Quantum Efficiency	Monochrome: < 57% NIR: < 60% Color: < 45%
Optical fill factor	n/a
Dynamic range	60dB
Characteristic curve	Linear
Shutter mode	Global shutter

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

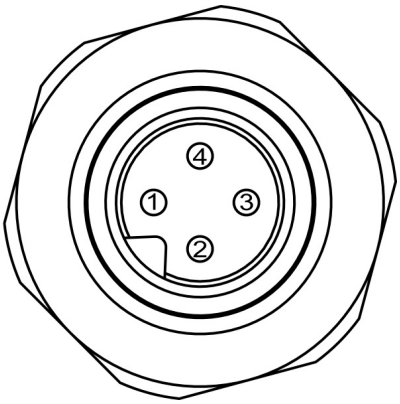
Camera Specifications

Interface	GigE
Frame rate	85fps
Pixel clock	n/a
Camera taps	n/a
Greyscale resolution	8Bit / 10Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	10µs - 419ms
Analog gain	yes
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger
Features	Configurable region of interest (ROI), Up to 8 regions of interest (MROI), Decimation in y-direction, 2 look-up tables (12-to-8Bit) on user-defined image region (Region-LUT), Constant frame rate independent of exposure time, Crosshairs overlay on the image, Temperature monitoring of camera, Camera informations readable over SDK, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Status line in picture
Operation temperature / moisture	0°C ... + 50°C / 20% ... 80%
Storage temperature / moisture	-25°C ... 60°C / 20% ... 95%
Power supply	PoE (compliant according to IEEE 802.3af standard Class: 2)
Power consumption	< 4.2W
Lens mount	C-Mount
I/O Inputs	2x Opto-isolated
I/O Outputs	1x Opto-isolated
Dimensions	30 x 30 x 54.2mm³
Mass	75g
Connector I/O (Power)	Binder 4-pole (mating plug M5 x 0.5, Series 707)
Connector Interface	X-coded M12
Conformity	CE / RoHS / WEEE
IP Code	IP40

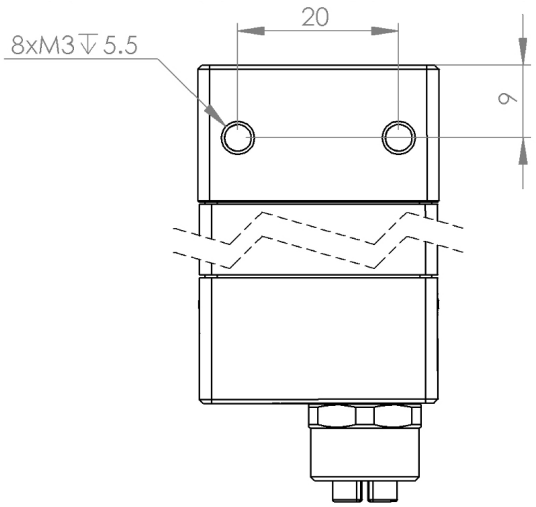
© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

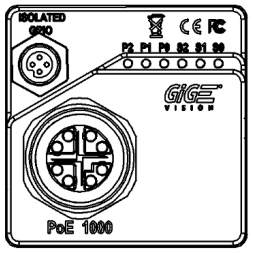
Connectors

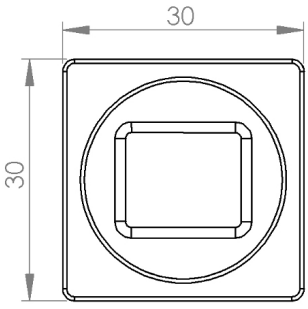
Pin	I/O Type	Name	Description
1	I	ISO_IN	Trigger input (opto-isolated)
2	PWR	ISO_GND	I/O GND 0V
3	O	ISO_OUT	Strobe output (opto-isolated)
4	n.a.	Reserved	Do not connect

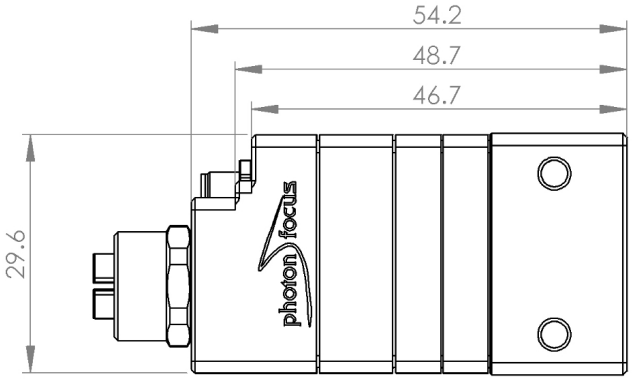


Dimensions









© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

MV0-D1280-O01-144-G2	BW model
MV0-D1280I-O01-144-G2	NIR model

Compatibility

Photonfocus AG
Bahnhofplatz 10
CH-8853 Lachen SZ
Switzerland

Phone: +41 55 451 00 00
www.photonfocus.com
info@photonfocus.com

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.