photon focus

MV4-D1280U-H01-GT

High-end product: UV camera with CMOS BSI technology and global shutter. It features an excellent **QE > 30% from 175nm to 865nm** and a frame rate of 140 fps at full resolution of 1280 x 1024 px. The MV4-D1280U-L01-GT camera is **primarily designed for UV applications. Additionally, it can also be used in the visible and NIR (near infrared) range thanks to its enormous spectrum.**

Features

- Photonfocus UV image sensor
- 175nm to 865nm
- 1280 x 1024 pixel resolution
- 140 frames per second (fps) @ 10Bit with 10 GigE
- 28fps @ 12Bit full format with high-precision mode
- Global shutter
- Extended sensor and camera features
- 4x Isolated inputs or shaft encoder
- 3x Isolated outputs
- GigEVision interface
- PoE (Power Over Ethernet) (IEEE 802.3bt standard Class 4) or Wall adapter (+12VDC (-10%) ... +24VDC (+10%))

GiGE VISION GEN<i>CAM

Quantum Efficiency Image Sensor

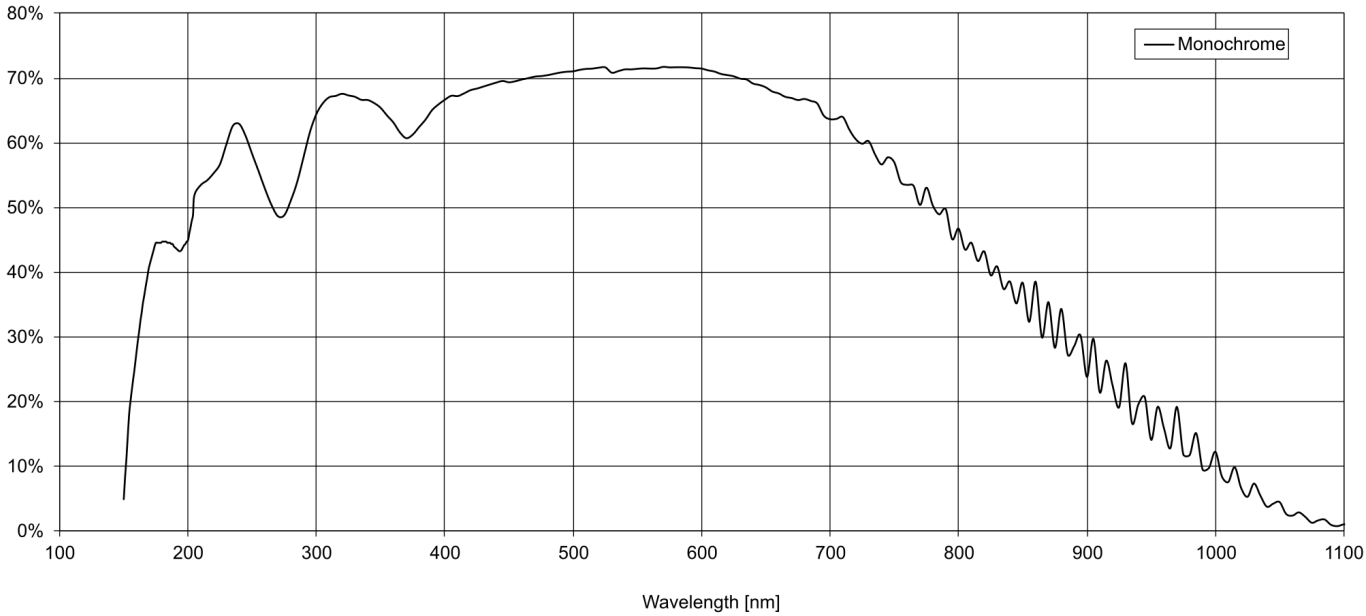


Image Sensor Specifications

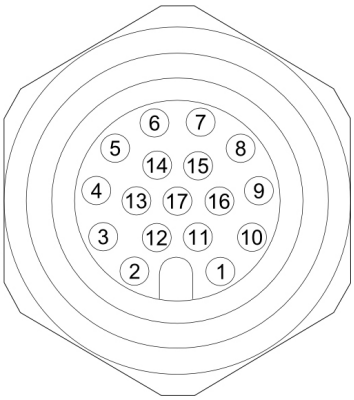
Manufacturer / Type	Photonfocus, UV
Technology	CMOS
Optical format	1"
Optical diagonal	12.13mm
Resolution	1280 x 1024
Pixel size	7.4µm x 7.4µm
Active optical area	9.47mm x 7.58mm
Dark current	252 e-/s
Read out noise	42 e-
Full well capacity / SNR	13ke- / 114:1
Spectral range	Monochrome: 160 to 1000nm (to 10% of peak responsivity)
Responsivity	Monochrome: 2500 x 10^3 DN / (J/m²) @ 550nm / 8bit
Quantum Efficiency	Monochrome: < 85%
Optical fill factor	100%
Dynamic range	53dB
Characteristic curve	Linear
Shutter mode	Global shutter

Camera Specifications

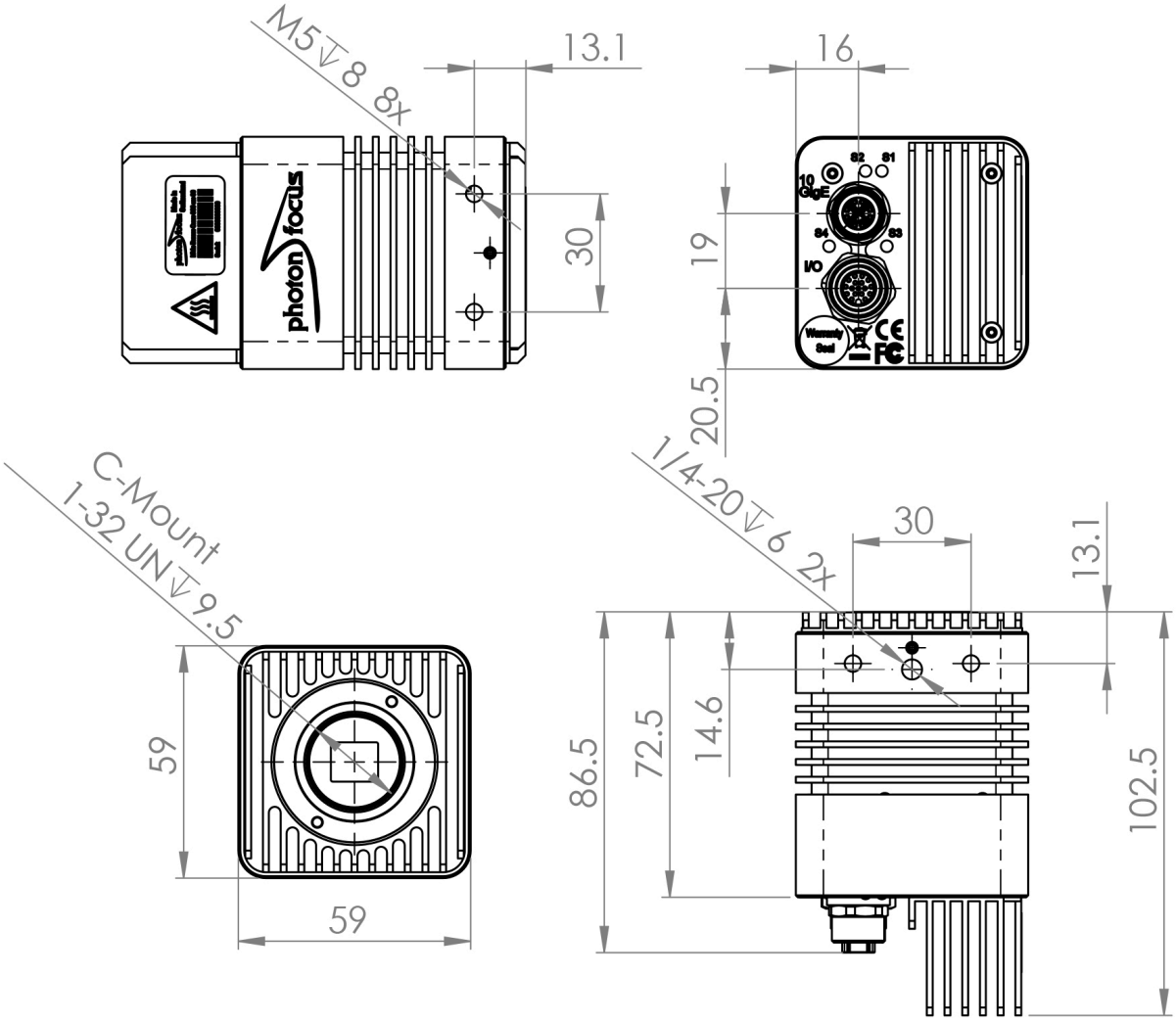
Interface	10GigE
Frame rate	28fps/140fps
Pixel clock	n/a
Camera taps	n/a
Greyscale resolution	8, 10 and 12 Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	280µs - 559ms
Analog gain	no
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger, Encoder
Features	28fps @ 12Bit full format with high-precision mode, up to 140fps @ 10Bit with 10 GigE, Linear mode, Extended spectral range of 150nm to 1000nm, Configurable region of interest (ROI), Two crosshairs overlays for measurements and adjustments, Temperature monitoring of camera, Low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, 4x Isolated inputs or shaft encoder A, B, Z, Y interface (RS422, TTL, D-HTL, HTL), 3x Isolated outputs (2x open drain, 1x TTL highspeed)
Operation temperature / moisture	0°C ... 50°C / 20 ... 80 %
Storage temperature / moisture	-25°C ... 60°C / 20 ... 95 %
Power supply	PoE (IEEE 802.3bt standard Class 4) or Wall adapter (+12VDC (-10%) ... +24VDC (+10%))
Power consumption	13.6W
Lens mount	C-Mount
I/O Inputs	4x Isolated inputs or shaft encoder A, B, Z, Y interface (RS422, TTL, D-HTL, HTL)
I/O Outputs	3x Isolated outputs (2x open drain, 1x TTL highspeed)
Dimensions	59 x 59 x 102.5 mm3
Mass	460g
Connector I/O (Power)	17-pol. M12
Connector Interface	X-coded M12
Conformity	CE / RoHS / WEEE
IP Code	IP40

Connectors

Pin	I/O Type	Name	Description
1	PWR	CAMERA_GND	Camera GND, 0V
2	PWR	CAMERA_PWR	Camera Power
3	I	ISO_INC0_P / ISO_IN0	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
4	I	ISO_INC0_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
5	I	ISO_INC1_P / ISO_IN1	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
6	I	ISO_INC1_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
7	I	ISO_INC2_P / ISO_IN2	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
8	I	ISO_INC2_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
9	I	ISO_IN3	Isolated TTL input
10	O	ISO_OUT2	Isolated TTL output
11	PWR	CAMERA_GND	Camera GND, 0V
12	PWR	CAMERA_PWR	Camera Power
13	O	ISO_OUT0	Isolated open drain output
14	O	ISO_OUT1	Isolated open drain output
15	IO	RS485_DATA_P	RS485 interface data positive polarity
16	IO	RS485_DATA_N	RS485 interface data negative polarity
17	PWR	ISO_GND	Isolated I/O GND



Dimensions



Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

MV4-D1280U-H01-GT	Spectral model (UV-VIS-NIR)	609.030.011

Compatibility

Photonfocus AG
Bahnhofplatz 10
CH-8853 Lachen SZ
Switzerland

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