

SPECIFICATIONS | PRELIMINARY DATA SHEET

# MV4-D1280U-H01-GT

## THE WORLD'S FIRST GLOBAL SHUTTER DEEP UV CMOS CAMERA



### General

Free run frame rate, full resolution	28 fps @ 12 bit Full Format with High-Precision Mode up to 140 fps @ 10 bit with 10 GigE
Optical area	9.47 x 7.58 mm, 12.13 mm diagonal
Pixel Size	7.4 µm square, global shutter (CDS), mono
Active Pixels	1,280 (h) x 1,024 (v), SXGA
Read-out modes	1x2*, 2x1*, 2x2*, 4x4*, 8x8* subsampling*

### EMVA 1288 Parameters

Absolute Responsivity (mono)	To Be Measured
Maximum SNR (mono)	To Be Measured

### Sensor Parameter

ADC resolution	12 Bit
Max. Frame Rate	up to 140 fps @ 10 bit
Spectral response	150 – 1,020 nm target
Full well capacity	19 ke-
Dark noise	50 e-
Dark current	252 e-/s
Dynamic Range	53 dB, gain 1x, 25 °C
Quantum Efficiency	>70% @ 550 nm
PRNU	4%

### Pixel Pipeline Output

	8 bit, 10 bit, 12 bit
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### Gain | Offset

analog	Black level, calibrated*
digital	Master Gain (0 .. ~24dB), 48dB Bitshift*

### I/O Interface

	Input, Trigger, Shaft encoder, TTL, RS422, HTL, dHTL Output, Strobe, 2 Open Drain, 1 Fast TTL
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### Trigger Modes

	Single Shot, Burst, Level Controlled Exposure
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### Exposure Modes

	Free run, Interleave, single timed and single trigger level controlled
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### MV4-D1280U-H01-GT

**High image quality thanks to global shutter technology and BSI.**

**Excellent QE with > 40% at 170 - 800 nm.**

**Extremely sensitive sensor: ranges from deep UV, over visible applications up to NIR.**

**Fast cycle times with up to 140 fps at full resolution.**

**Fast readout with standard 10 GigE interface and up to 300 m long cables.**

**Standard C-Mount lens connection.**

**Robust industrial-grade design for an excellent total cost of ownership.**

**Modular design for fast and easy integration into your application.**

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## Main Interface

	10 GigE, Auto Negotiation*, Backwards compatible to NBase T and GigE 1 GigE*, CXP* X coded M12, RJ45*
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## Software Features

	GigE Vision 1.2   2.2* PTP Precision Timing Protocol (IEEE1588)* Auto Gain*, Exposure* Single ROI, Multi ROI*, Flip*, Mirror, Sequencer* Readout optical black area* Sensor and camera temperature
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## Housing

	C Type Lens Mount, adjustable back flange Dimensions Front 59 mm x 59 mm x 102.5 mm Mounting 8x M5 Weight: 460 g Quartz glass, No protection glass*, filter mount available*
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## Power

	12 – 24V ± 10%, < 15W, 17 Pin M12 PoE 802.3af Class 4 (25W)
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## Temperature

	Operating 0 to 45 °C Ambient (Extended Temp. Available*) Storage -20 to 70 °C Ambient
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## Humidity

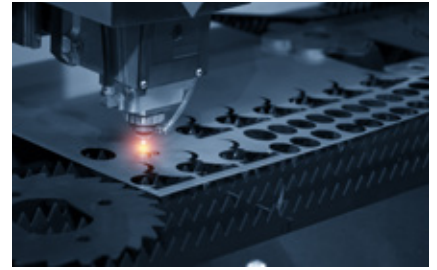
	20 – 80% Non-condensing
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## Regulations

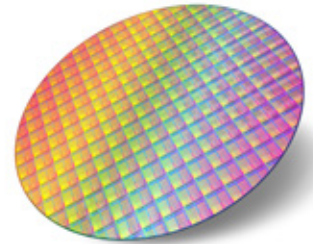
	CE Class A (B*), FCC Class A (B*), RoHS, UL, WEEE
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**RAILWAY:**  
Pantograph Spark Detection

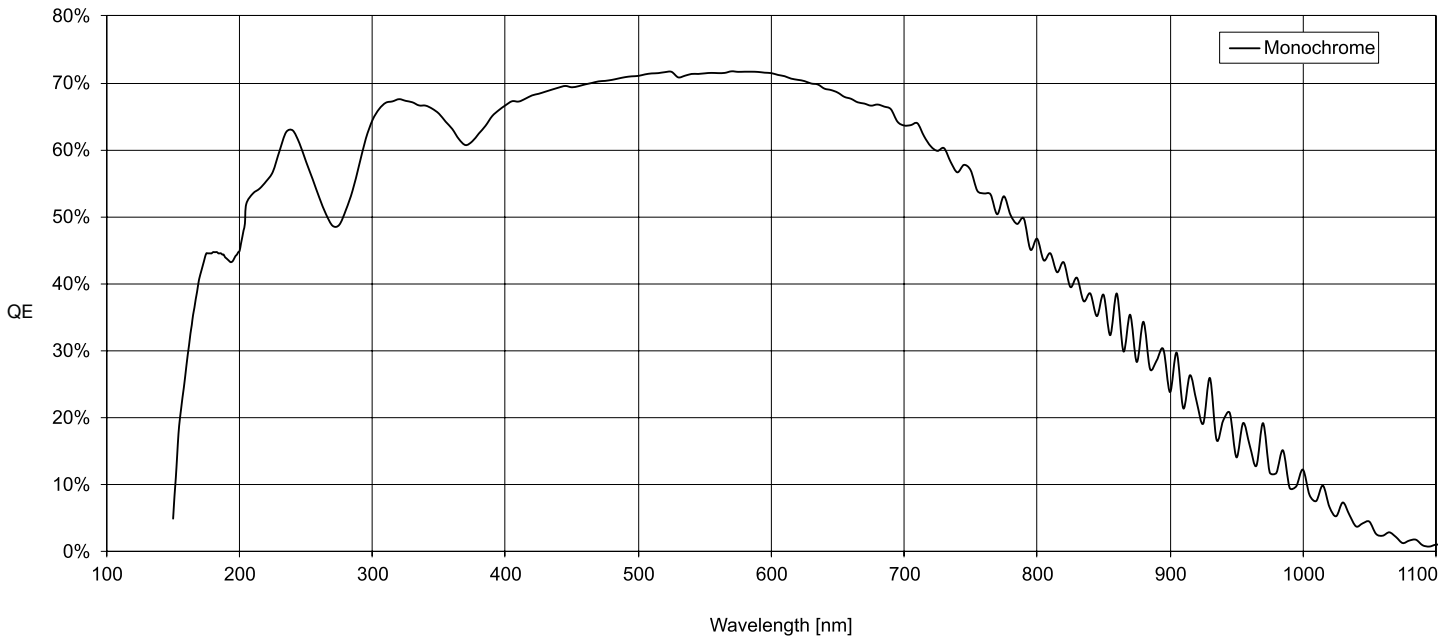


**UV LASER:**  
Beam Profilometry



**WAFER**  
Scratch Detection

## Quantum Efficiency vs. Wavelength (Typical Spectral response) – Ta = 25 °C



Photonfocus cannot be held responsible for any technical or typographical errors and reserves the right for any changes

\*On demand / customer project  
Version 2.5 | January 25 2021  
This specification may change without notice