MV-D1024E-3D01-160-CL

The CMOS camera MV-D1024E-3D01-160-CL was developed for laser triangulation of highly reflective materials

Features

- Detection of a laser line with sub-pixel accuracy
- Photonfocus A1024B CMOS image sensor
- 1024 x 1024 pixel resolution
- Exceptional SNR up to 447: 1
- Dynamic range up to 120dB via LinLog®
- Up to 3100fps @ 24x1024 pixels
- Global shutter
- Monochrome
- Extended sensor and camera features
- Reduction of ROI in x- and y-direction increases frame rate
- CameraLink® interface
- Free GUI available (PF 3D Suite)

Quantum Efficiency Image Sensor

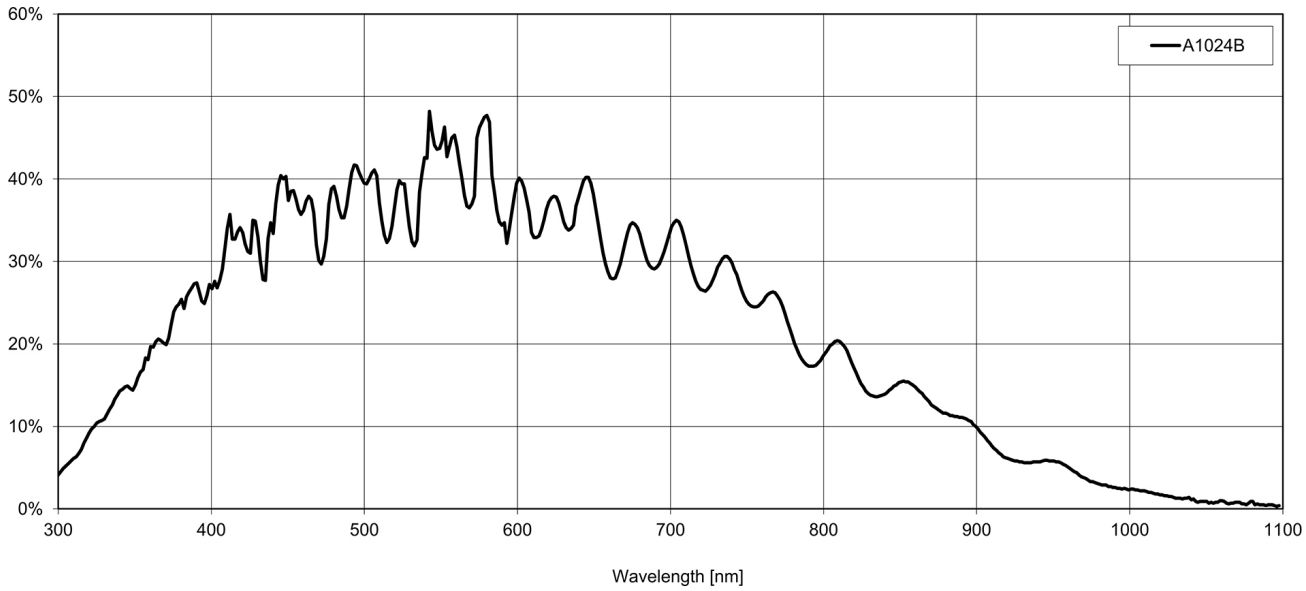


Image Sensor Specifications

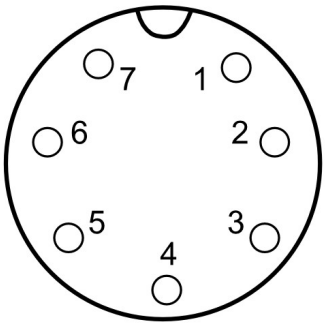
Manufacturer / Type	Photonfocus / A1024	
Technology	CMOS	
Optical format	1"	
Optical diagonal	15.42mm	
Resolution	1024 x 1024	
Pixel size	10.6µm x 10.6µm	
Active optical area	10.9mm x 10.9mm	
Dark current	107'000e^-/s	
Read out noise	220e^-	
Full well capacity / SNR	200ke^- / 447: 1	
Spectral range	Monochrome:	< 400 to 900nm (to 10% of peak responsivity)
Responsivity	Monochrome:	120 x 10^3 DN / (J/m²) @ 610nm / 8bit
Quantum Efficiency	Monochrome:	> 45%
Optical fill factor	35%	
Dynamic range	60dB in linear mode; 120dB with LinLog®	
Characteristic curve	Linear, LinLog®, Skimming	
Shutter mode	Global shutter	

Camera Specifications

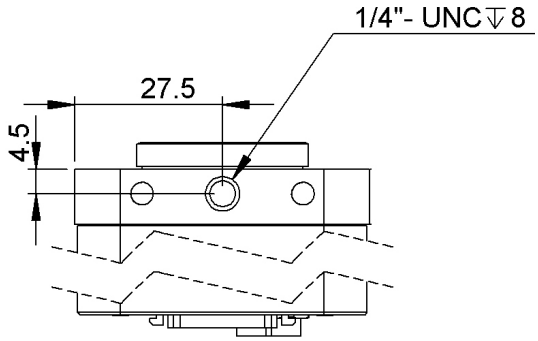
Interface	Camera Link
Frame rate	3100fps
Pixel clock	80MHz
Camera taps	2
Greyscale resolution	8Bit / 10Bit / 12Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8bit
Exposure time range	10µs - 419ms
Analog gain	n/a
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger
Features	Detection of a laser line (peak detector) with sub-pixel accuracy, Configurable region of interest (ROI), Dynamic range up to 120dB via LinLog®, Image correction, Constant frame rate independent of exposure time, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Camera informations readable over SDK, Free GUI available (PF 3D Suite) for an easy system set up and visualisation of 3D scans
Operation temperature / moisture	0°C ... + 50°C / 20% ... 80%
Storage temperature / moisture	-25°C ... 60°C / 20% ... 95%
Power supply	+12VDC (-10%) ... +12VDC (+10%)
Power consumption	< 3.2W
Lens mount	C-Mount (CS-Mount optional)
I/O Inputs	1x Opto-isolated
I/O Outputs	1x Opto-isolated
Dimensions	55 x 55 x 40mm³
Mass	210g
Connector I/O (Power)	Binder 7-pole (mating plug 99-0421-00-07)
Connector Interface	CameraLink Base (MDR)
Conformity	CE / RoHS / WEEE
IP Code	IP20

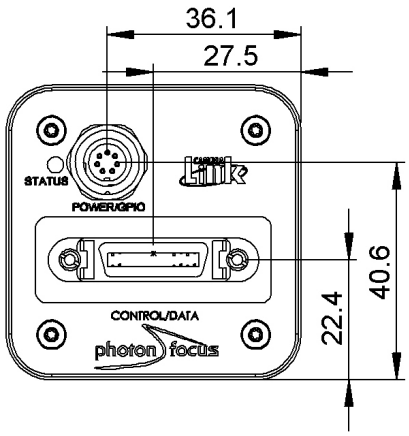
Connectors

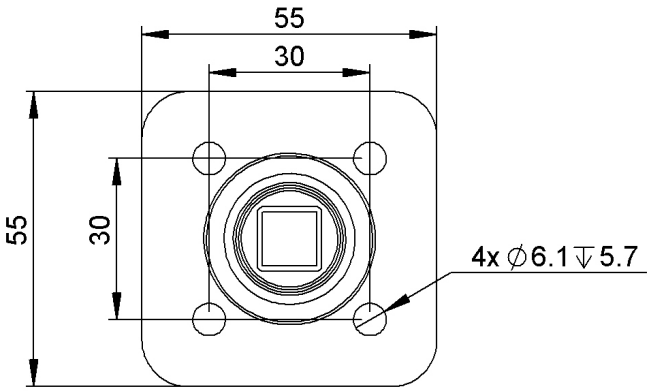
Pin	I/O Type	Name	Description
1	PWR	CAMERA_PWR	Camera Power 12VDC
2	PWR	CAMERA_GND	Camera GND 0V
3	O	RESERVED	Do not connect
4	PWR	STROBE-VDD	+5 ... +15 VDC
5	O	STROBE	Strobe control (opto-isolated)
6	I	TRIGGER	External trigger (opto-isolated), +5 .. +15VDC
7	PWR	GROUND	Signal ground (for opto-isolated strobe signal)

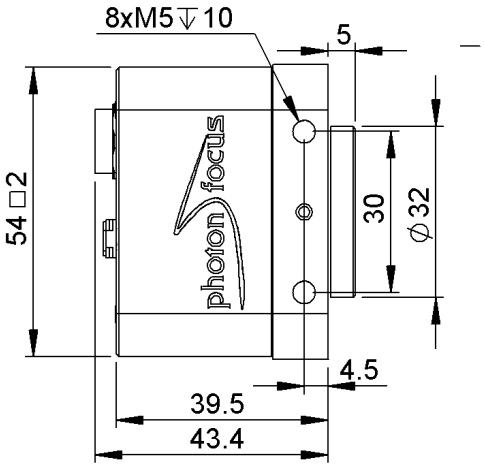


Dimensions









Explanation

DN	DigitalNumber (equals to LSB)
e^-	Electrons

Order Information

MV-D1024E-3D01-160-CL-12	CameraLink Model

Compatibility

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