data sheet
pco.edge 26 CLHS

fast true charge domain global shutter

NIR near infrared*

resolution
26.2 MPixel

pixel size
2.5 µm x 2.5 µm

interface
CLHS FOL

pco.
edge
sCMOS

1288
EMVA Standard Compliant

near infrared variant
available*

high resolution
5120 x 5120 pixel

small pixel size of
2.5 µm x 2.5 µm
ideal for low magnifications

excellent frame rate
150 fps @ 26 MPixel

low readout noise
3.4 e$^-$ (rms)

temperature-stabilized
image sensor

pco.

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technical data

image sensor	pco.edge 26 CLHS	pco.edge 26 NIR CLHS
sensor technology	scientific CMOS (sCMOS)	
color type	monochrome	
resolution (horizontal x vertical)	5120 pixel x 5120 pixel	
pixel size (horizontal x vertical)	2.5 µm x 2.5 µm	
sensor size (horizontal x vertical)	12.8 mm x 12.8 mm	
sensor diagonal	18.1 mm	
shutter type	global / snapshot shutter (GS)[1]	
modulation transfer function (theoretical max.)	200.0 lp/mm	
fullwell capacity	4.000 e-	tbd
readout noise (typ.)	3.4 e- rms	tbd
dynamic range (intra-scene)	61.4 dB	tbd
peak quantum efficiency	65 % @ 500 nm	68 % @ 560 nm
spectral range	320 nm - 1000 nm	
dark current	0.4 e-/pixel/s @ +15 °C sensor temperature	

[1] true charge domain global shutter

frame rate table	pco.edge 26 CLHS	pco.edge 26 NIR CLHS
vertical resolution reduction		
5120 x 5120	150 fps	
5120 x 1024	732 fps	
5120 x 512	1422 fps	
5120 x 256	2692 fps	
5120 x 128	4859 fps	

typical resolutions		
1920 x 1080	695 fps	
1600 x 1200	627 fps	
1280 x 1024	732 fps	
640 x 480	1512 fps	
320 x 240	2851 fps	

camera	pco.edge 26 CLHS	pco.edge 26 NIR CLHS
max. frame rate @ full resolution	150 fps	
exposure time range	27 µs - 60 s	
dynamic range A/D	10 bit	
conversion factor[2]	0.24 e⁻/DN	
pixel rate	3.93 GPixel/s	
region of interest (ROI)	horizontal: steps of 32 pixel vertical: steps of 4 pixel	
binning[3]	horizontal: x2, x4 vertical: x2, x4	
non-linearity	< 0.34 %	
dark signal non-uniformity (DSNU)	< 0.9 e⁻ rms	
photo response non-uniformity (PRNU)	< 0.7 %	
cooling temperature image sensor	+15 °C stabilized (calibration setpoint)	
cooling method	adjustable: from 0 °C to +25 °C peltier with forced air (fan) and water cooling	
trigger input signals	frame trigger, sequence trigger (tbd), programmable input	
trigger output signals	exposure, busy, programmable output	
input / output signal interface	SMA connectors	
time stamp	in image (1 µs resolution)	
data interface	Camera Link HS FOL	

[2] According to EMVA1288 the conversion factor equals the inverse of the system gain and can be operational mode dependent.

[3] Optional sum / average

quantum efficiency
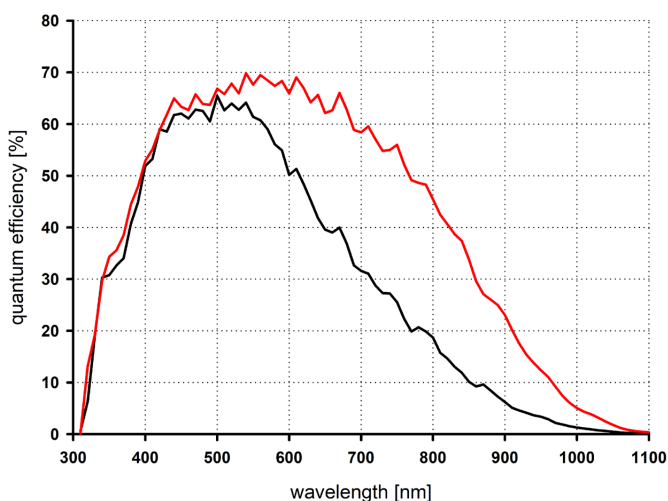
left: quantum efficiency image sensor (black: pco.edge 26 CLHS, red: pco.edge 26 NIR CLHS);

right: camera rear view

general	pco.edge 26 CLHS	pco.edge 26 NIR CLHS
power supply	24 VDC (±10 %)	
power consumption	26 W (typ.)	
weight	970 g	
dimensions (height x width x length)	95 mm x 90 mm x 109 mm	
operating temperature range	+10 °C to +40 °C	
operating humidity range	10 % to 80 % (non-condensing)	
storage temperature range	-10 °C to +60 °C	
storage humidity range	10 % to 80 % (non-condensing) (tbd)	
CE / FCC certified	yes	

optical interface	pco.edge 26 CLHS	pco.edge 26 NIR CLHS
direct mounting	6.2 mm ± 10 %	
lens mounting	C-Mount	
optional lens mounting	F-Mount, TFL-Mount	
optional lens remote controller	EF-Mount, EF-S-Mount (Canon)	

Configure your optical setup with our **MachVis Lens Selector** online tool.

dimensions
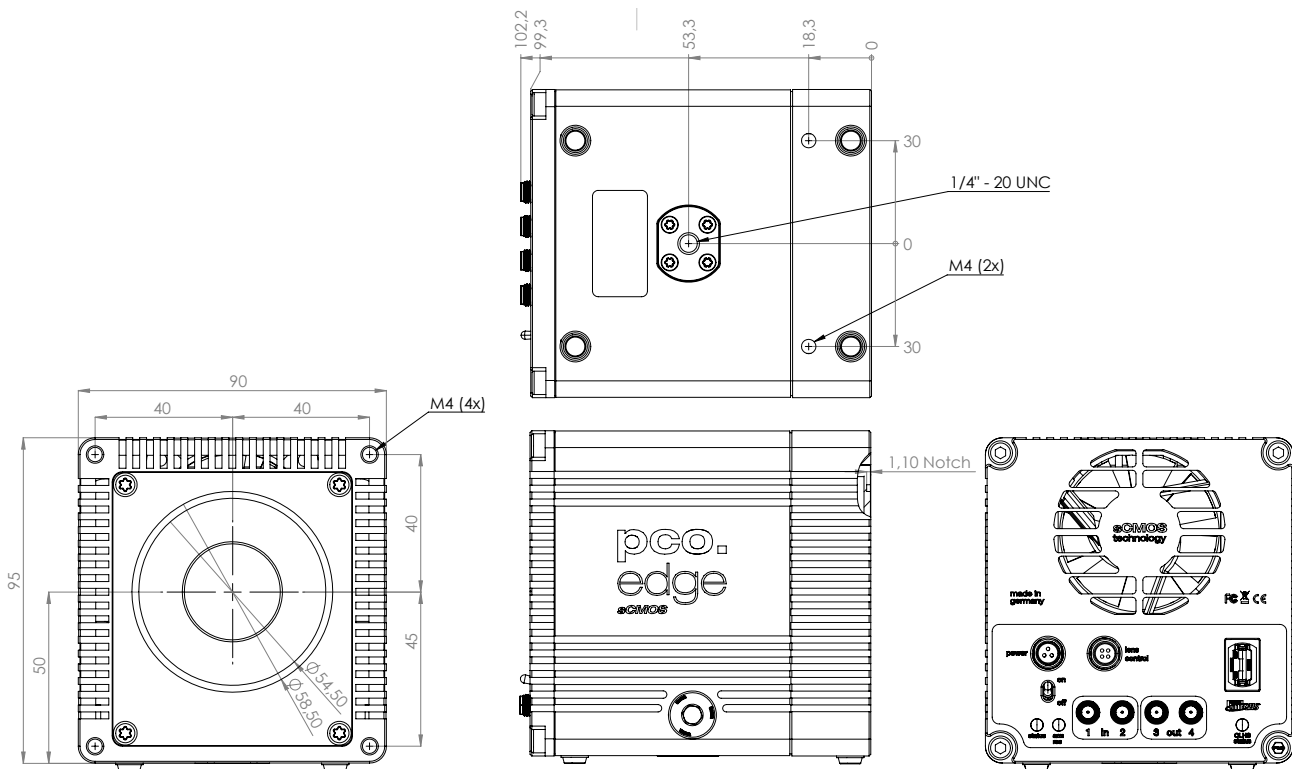
Outlines of pco.edge 26 CLHS (all dimensions given in mm).

software

Our main camera control software pco.camware is the first choice to get started with your camera. It enables full control of all camera settings and makes image acquisition and storage very easy. Using different layouts, stiles and features you can customize it exactly to your needs.

### You are using a different software:

PCO cameras are also integrated in a variety of software applications. Check our homepage to find a list of all applications that support PCO cameras.

(in preparation)

You want to create your own application for the camera:

We offer a wide range of Software Development Kits (SDK) for different programming languages, both for windows and linux. Our pco.sdk, pco.recorder and high-level SDK are designed for C/C++ apps. With pco.python, pco.matlab, pco.labview and pco.java you can control the camera in your C#, python, matlab, labview and java applications, respectively.
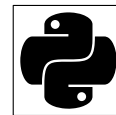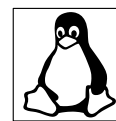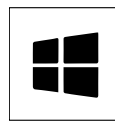
Your use case is in the field of microscopy:

PCO cameras are also integrated in µManager.

areas of application

bright-field microscopy | fluorescence microscopy | digital pathology | lightsheet fluorescence microscopy (LSFM) | structured illumination microscopy (SIM) | high-speed bright-field ratio imaging | high throughput screening | high content screening | biochip reading | digital pathology | 3D metrology | industrial quality inspection | flow cytometry | in-vivo microscopy | intravital microscopy | multispectral imaging | whole slide scanning

ordering information		
pco.edge 26 CLHS	85108076003	camera system, monochrome, 5120x5120 pixel, air & water cooled, CLHS FOL
pco.edge 26 NIR CLHS	85108076008	camera system, monochrome, 5120x5120 pixel, air & water cooled, CLHS FOL, enhanced NIR-sensitivity

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