pco.edge 10 bi CLHS
the next level **sCMOS** camera

1288
EMVA Standard Compliant

CAMERA **Link HS**®

back–illuminated
with high MTF

high resolution
4432 x 2368 pixel

low readout noise
0.8 e⁻

high dynamic range
25,000 : 1

temperature–stabilized
image sensor

fiber–optic
data interface

interface	CLHS FOL
sensor technology	sCMOS
color type	monochrome
resolution [pixel]	4432 x 2368
sensor diagonal [mm]	23.1
pixel size [µm]	4.6 x 4.6
max. frame rate @ full resolution [fps]	120
max. pixel rate [MPixel/s]	1467
peak QE	85 % @ 500 nm
typ. read noise¹ [e⁻]	0.8
dark current @ sensor temperature [e⁻/pixel/s]	0.2 @ +10 °C
max. dynamic range	25,000 : 1
shutter type	RS (Rolling Shutter)
sensor cooling²	air & water
dimensions H x W x L [mm]	95 x 90 x 109
additional options	lightsheet scanning mode, lens control

¹ The readout noise values are given as median (med).
 All values are raw data without any filtering.
² air = air forced with fan | water = external water connection

the next level sCMOS

The pco.edge 10 bi is PCO's next level sCMOS camera with unprecedented imaging performance.
Thanks to its back-illuminated image sensor it comes with a quantum efficiency of up to 85 % with broad spectrum out to NIR. The sensor incorporates microlenses and a full pixel height deep trench isolation for crosstalk suppression resulting in an excellent MTF.

Further, the camera provides a large image circle by using a high-resolution 10.5 MPixel image sensor with a square pixel size of 4.6 um. An extremely low dark current and a readout noise of 0.8 electrons is achieved by thermal stabilization and active cooling of the sensor. Moreover, the sensor technology enables reduction of the noise peak and tail in addition, which makes it comparable to to the noise behavior of CCD sensors. Together with a high full well capacity, this leads to a dynamic range of 25,000:1. The camera offers high frame rates of up to 120 fps and transmission via a fiber-optic link.

All these features make the pco.edge 10 bi the first choice for applications in microscopy, life science, and physical science.

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