

pco.edge 4.2 bi XU

optimized for EUV & soft X-ray applications

high spatial resolution
2048 x 2048 pixel

pixel size
6.5 μm x 6.5 μm

low readout noise
1.9 e^-

well suited for
EUV & soft X-ray applications

high QE in the energy range
30 to 1000 eV

usable with vacuum
down to 1×10^{-7} mbar

interface	USB 3.1 Gen 1
sensor technology	sCMOS PulSar
spectral range [nm]	1 to 1100 (1.2 keV to 1.1 eV)
resolution [pixel]	2048 x 2048
sensor diagonal [mm]	18.8
pixel size [μm]	6.5 x 6.5
max. frame rate @ full resolution [fps]	40 (16 bit)
max. pixel rate [MPixel/s]	184 (16 bit)
peak QE	> 95 % @ 2.28 nm
typ. read noise¹ [e^-]	1.9
dark current @ sensor temperature [$\text{e}^-/\text{pixel}/\text{s}$]	0.2 @ -25 °C
max. dynamic range	26,667:1
shutter type	RS (Rolling Shutter), GR (Global Reset)
sensor cooling²	adjustable: from -25 °C to +20 °C peltier with forced air (fan) and water cooling calibration setpoint: -10 °C
dimensions³ H x W x L [mm]	152 x 152 x 99
opto-mechanical interface	CF100-flange

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

³ incl. CF100-flange

Explore extreme UV & soft X-ray

The pco.edge 4.2 bi XU is based on a back illuminated sCMOS sensor with a very specific coating which allows applications in the visible light down to extreme UV (EUV) and soft X-ray radiation. The camera is adapted for ultra-high vacuum operations and has been characterized using soft X-ray in the energy range from 30 eV to 1000 eV. The image sensor features 2048 x 2048 pixel with a pixel size of 6.5 μm x 6.5 μm and allows full frame acquisitions at 48 Hz with a dynamic range of 88 dB at a noise level of 1.9 e^- . The camera is compact and offers various software integration options.



pco.

An Excelitas Technologies Brand