

pco.panda 4.2

sCMOS camera system



65 mm

ultra
compact
design

pco.panda 4.2

technical specifications

image sensor

type of sensor	sCMOS (scientific CMOS)
resolution	2048 x 2048 pixel
pixel size	6.5 μm x 6.5 μm
sensor format / diagonal	13.3 mm x 13.3 mm / 18 mm
shutter mode	rolling shutter (RS)
MTF	76.9 lp/mm (theoretical)
fullwell capacity (typ.)	45 000 e ⁻
read out noise (typ.)¹	2.1 med e ⁻ / 2.3 rms e ⁻
dynamic range (typ.)	87 dB
quantum efficiency	up to 80 %
dark current (typ.)	15 e ⁻ /pixel/s @ 21 °C ambient temp.
DSNU	0.5 me ⁻ e ⁻ @ 21 °C ambient temp.
PRNU	0.6 %

¹The readout noise values are given as median (med) and root mean square (rms) values, due to the different noise models, which can be used for evaluation. All values are raw data without any filtering.

camera

frame rate	40 fps @ full resolution
exposure / shutter time	100 μs .. 5 s
dynamic range A/D	16 bit
A/D conversion factor	0.65 e ⁻ /count
region of interest (ROI)	horizontal: steps of 4 pixels vertical: steps of 1 pixel (min 4 pixels) < 0.6 %
non linearity	passive cooling
cooling method	frame trigger, acquire (SMA connectors)
trigger input signals	exposure, busy (SMA connectors)
trigger output signals	USB 3.1 Gen 1
data interface	in image (1 μs resolution)
time stamp	

general

power delivery	via USB Type-C
power consumption	< 4.5 W
weight	420 g
operating temperature	+10 °C .. +40 °C
operating humidity range	10 % .. 80 % (non-condensing)
storage temperature range	-10 °C .. +60 °C
optical interface	C-mount (optional: F-mount)
CE / FCC certified	yes

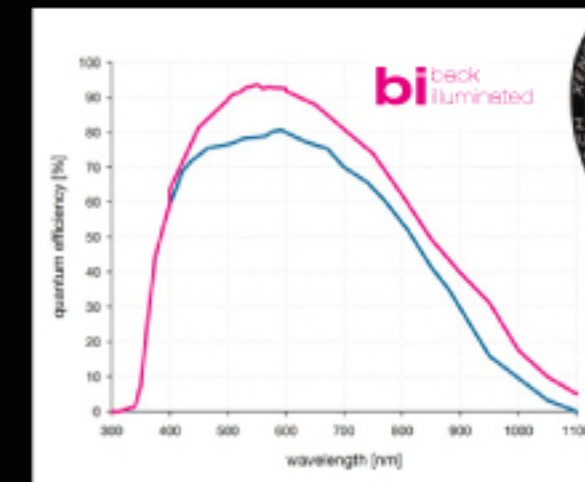
frame rate table

2048 x 2048	40 fps
2048 x 1024	80 fps

new »

pco.panda 4.2 bi

quantum efficiency
pco.panda 4.2 vs pco.panda 4.2 bi



up to 95% QE



bi back
illuminated

Pyramid Imaging, Inc
945 E. 11th Ave
Tampa Florida 33605
813-984-0125

sales@pyramidimaging.com
www.pyramidimaging.com