pco.panda 26 DS

the new dimension in sCMOS double imaging

double shutter
interframing time 1 µs

dust-protected
housing

high resolution
5120 x 5120 pixels

ultra compact
design

true charge domain
global shutter

pco.
panda sCMOS

DS double shutter
sCMOS

pco.panda 26 DS

Two distinct 26 MPixel images with an interframing gap as low as 1 µs?

The outstanding global shutter capabilities of the **pco.panda 26 sCMOS** sensor make it a perfect candidate for effective **double imaging** – a prerequisite to perform all types of **P**article **I**mage **V**elocimetry measurements in flow analysis. In **PIV**, light scattering particles are added to the flow under test. A laser beam is formed into a light sheet, illuminating the scattering particles twice with a short pulse at a time interval Δt. The lower limit for this time interval is defined by the **double shutter interframing time** of the camera. The scattered light is recorded onto two consecutive frames of a high resolution digital camera. The shorter the **double shutter interframing time**, the higher the flow speeds which can be analyzed.

technical table	resolution	pixel size	exposure time	double shutter interframing time	frame rate	dynamic range	parasitic light sensitivity	quantum efficiency	data interface
pco.panda 26 DS	5120 x 5120	2.5 x 2.5 µm	6 µs to 350 ms	**1 µs **	6 fps * 1 fps ** 12 fps * 6 fps **	66 dB	**1 : 10,000**	up to 65 %	USB 3.1 Gen 1
	2560 x 2560								

* single shutter mode
** double shutter mode

Principled timing scheme for a pco.panda 26 DS in double shutter mode used for PIV measurements
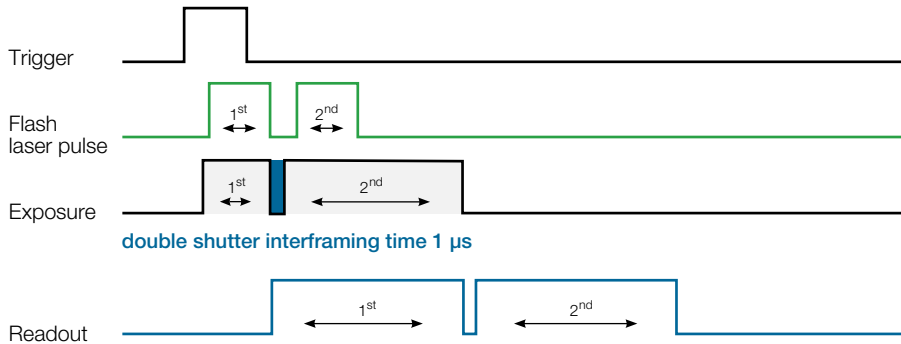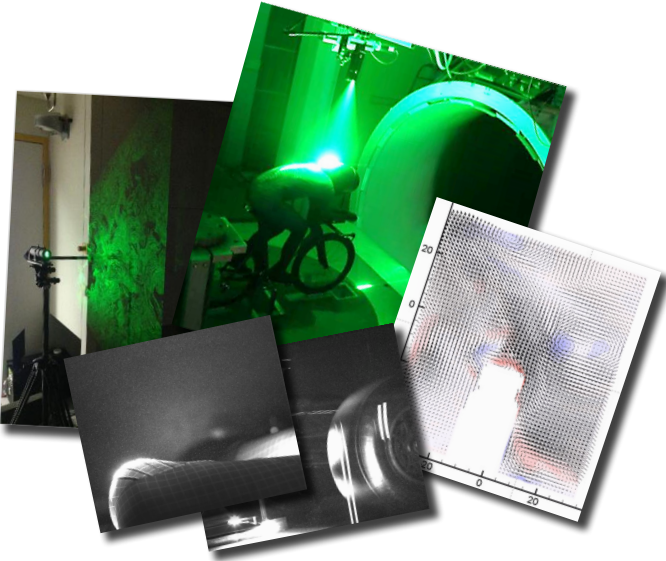

Image material with courtesy of ILA 5150

The duration of the first exposure time can be configured. The duration of the second exposure time is fixed and pre-defined by the readout time of the first image. Therefore, it is usually necessary to prevent the sensor from ambient light during the prolonged second exposure time.

sCMOS cameras

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