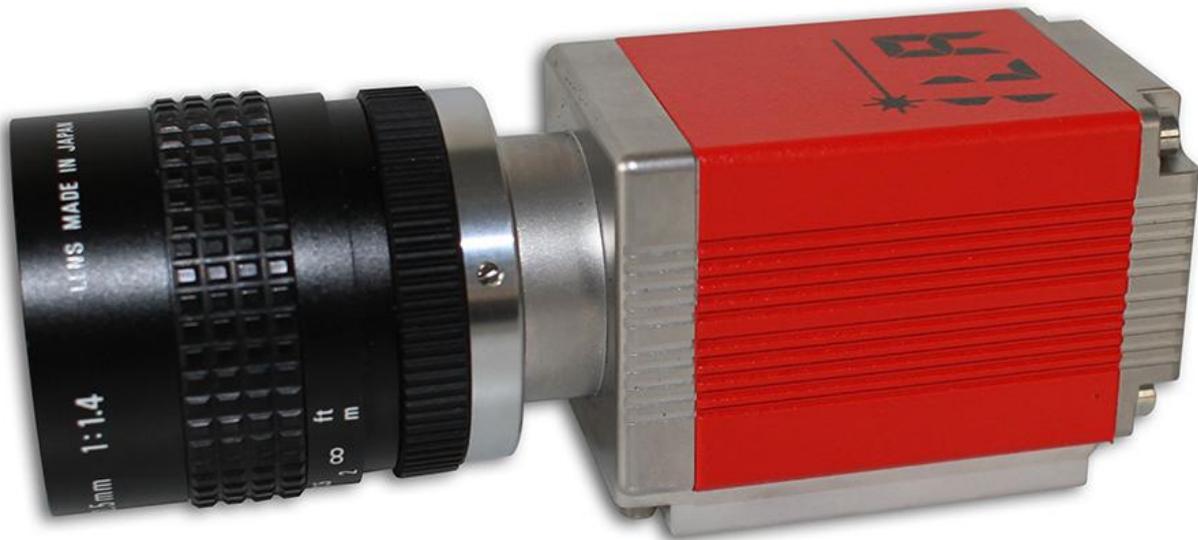


ILA.PIV.Nano Camera



The camera with one of the highest quantum efficiency value in the PIV branch is also at the same time the smallest available camera. The small form factor is enabled through the design of the ultra compact camera head and the integration of digital temperature compensation.

The ILA.PIV.Nano camera comes with a 14 bit CCD image sensor, which is specially designed for low light applications in the visible spectral range.

In addition to the pocket size dimensions and high-end performances, it also has a low price making it the perfect camera for smaller budgets.

Specifications

General

power supply	9..28 VDC (12 VDC typ.)
power consumption	< 4 W
weight	250 g
operating temp.	+10 °C .. +45 °C
operating humidity	10% .. 80% (non-condensing)
storage temp range	-20 °C .. +70 °C
optical interface	C-mount*
CE certified	yes

* F-mount available upon request

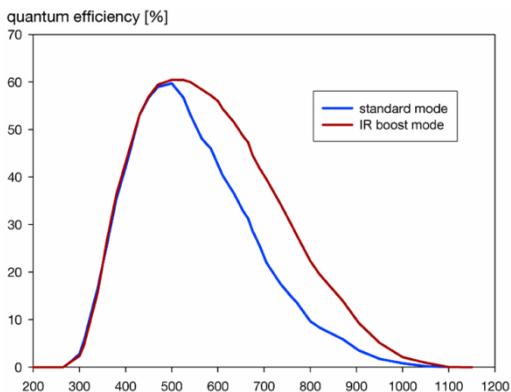
Image Sensor

type of sensor	CCD
image sensor	ICX285AL
resolution (h x v)	1392 x 1040 pixel (normal) 800 x 600 (center)
pixel size (h x v)	6.45 µm x 6.45 µm
sensor format	2/3"
diagonal	11.14 mm
shutter mode	global (snapshot)
dynamic range	2667 : 1 (68 dB, 12MHz, full frame)
quantum efficiency	65% @ peak
spectral range	290 nm .. 1100 nm
MTF	77.5 lp/mm (theoretical)
fullwell capacity	16 000 e ⁻ (full frame) 24 000 e ⁻ (binning)
readout noise	5 .. 7 e ⁻ rms @ 12 MHz (typ.) 6 .. 8 e ⁻ rms @ 24 MHz (typ.)
dark current	1 e ⁻ /pixels/s @ 23 °C
DSNU ¹	< 2 e ⁻ rms
PRNU ²	< 1%

Frame rate table

resolution	normal	center		
pixelclock [MHz]	12	25	12	25
1392x 1040	7.3fps	13.5 fps	11.7 fps	21.6 fps
v2 binning	14.7 fps	27 fps	21.8 fps	40.4 fps

Quantum efficiency



¹ Dark signal non-uniformity measured in a 90% center zone of the image sensor

² Photo response non-uniformity

Camera

frame rate	7.3 / 13.5 fps (12 / 25 MHz, normal) 11.7 / 21.6 fps (12 / 25 MHz, center)
exposure / shutter time	5 µs .. 60 s
interframing time	1 µs
dynamic range A/D	14 bit
A/D conversion factor	1.0 e ⁻ /count
pixel scan rate	12 MHz / 24 MHz
pixel data rate	19.5 Mpixel/s
binning (hor x ver)	1 x 1 .. 2 x 2
non linearity	< 1%
smear	< 0.002 %
anti-blooming factor	> 400 (standard 100 ms exposure) > 4 (NIR enhanced 100 ms exposure)
trigger input signals	software / TTL level
trigger output signals	3.3 V LVTTTL level
data interface	USB

