iLA.PIV.sCMOS CLHS Camera

The ILA.PIV.sCMOS CLHS is our flagship when your application is though and demands are high:

- interframing time as low as 120 ns
- New CamLink HS
  - Effective bandwidth of nearly 1,2 GB/s
  - Cable length up to 10 km possible
- 16 bit dynamic range
- >60% quantum efficiency

Now, you are prepared for every PIV task at hand.
To facilitate camera setup a remote focus control is directly integrated. Adjust your Canon EF lens precisely via our intuitive software without the need to access the camera anymore.

Data Sheet
June 2024

ILA_5150 GmbH
Rotter Bruch 26a
52068 Aachen - Germany
Fon +49(0)241 95789-814
info@ila5150.de ,www.ila5150.de

iLA.PIV.sCMOS CLHS Camera

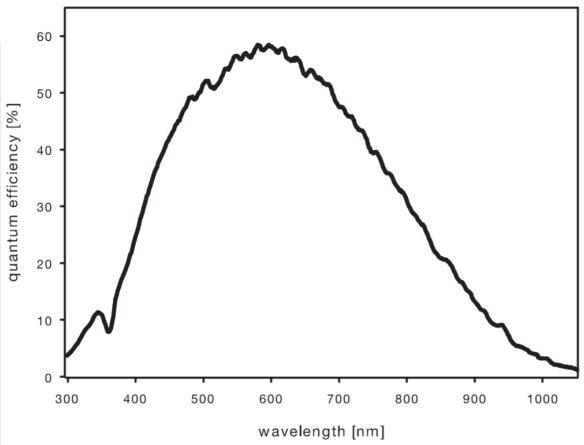
General	
power supply	12..24 VDC (±10%)
power consumption	32 W max. (typ. 19W @ 20 °C)
weight	1000 g
operating temp.	+10 °C .. +40 °C
operating humidity	10% .. 80% (non-condensing)
storage temp range	-10 °C .. +60 °C
optical interface	Canon EF lens mount*
CE / FCC certified	yes

* F-mount available upon request

Frame rate table[3]

Typical resolution	rs	gs
2560 x 2160	100	50
2560 x 1024	212	105
1920 x 1080	201	100

Quantum efficiency [%]



[1] The 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.

[2] Raw data without filtering.

[3] Max. fps with centered ROI.

[4] The high dynamic signal is simultaneously converted at high and low gain by two 11 bit A/D converters and the two 11 bit values are sophistically merged into one 16 bit value

Image Sensor	
type of sensor	scientific CMOS (sCMOS)
image sensor	CIS2521
resolution (h x v)	2560 x 2160 pixel
pixel size (h x v)	6.5 µm x 6.5 µm
sensor size	16.6 mm x 14.0 mm
diagonal	21.8 mm
shutter modes	Rolling (rs) and global (gs)
dynamic range	30 000 : 1 (86.9 dB)
quantum efficiency	>60% @ peak
spectral range	370 nm .. 1100 nm
anti blooming factor	>10 000
MTF	76.9 lp/mm (theoretical)
fullwell capacity	30 000 e^-
readout noise[1]	2.5_{rms} / 2.2_{med} e^- @ (gs, fsc^2)
dark current[4] @ 7 °C	< 0.6 e^-/pixels/s (rs) < 0.9 e^-/pixels/s (gs)
DSNU	< 3.9 e^- rms (gs, fsc^2)
PRNU	< 0.34%

Camera	
frame rate	100fps @ 2560 x 2610 pixel (rs, fsc^2) 50fps @ 2560 x 2160 pixel (gs, fsc^2)
exposure / shutter time	500 µs .. 2 s (rs) 10 µs .. 100 ms (gs)
interframing time	as low as 120 ns
dynamic range A/D[2]	16 bit
A/D conversion factor	0.46 e^-/count
pixel scan rate	286 MHz (fsc^2)
pixel data rate	572 Mpixel/s
region of interest	Selectable in steps of 16 hor / 1 vert Px
non linearity	< 0.6%
cooling method	Peltier with forced air (fan); +7°C stabilized up to 27°C ambient
trigger input signals	frame or sequence trigger
trigger output signals	exposure, busy
data interface	Camera Link HS (Single-F2,1X1,S10)

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