

## heliCam C3 - Fast Lock-in Camera

The lock-in camera was originally developed for low coherence interferometry, but the heliSens™ S3.1 sensor and the camera board have found new life with a variety of applications other than OCT, for example, pump-probe spectroscopy. For ease of integration, the Heliotis' core technology is now available as a rigid camera, capable of capturing and processing more than 1 million 2D-images per second.

### Features

- Robust and compact aluminum housing
- C-mount for objectives
- USB data interface
- Comprehensive software package
  - heliViewer™
  - Driver for C++, Halcon, LabVIEW®, Python



### Specification

#### C3.1.1-CP-MLO and C3.1.1-CP-ML1

<i>Parameter</i>	<i>Value</i>
Die Size	19.71 mm x 16.89 mm
Number of Columns	300, [center 280 usable, 2x10 columns are test columns]
Number of Rows	300, [center 292 usable, 2x4 rows are test rows]
Total number of pixels	90'000
Column Pitch $\Delta X_{\text{pixel}}$	39.6 $\mu\text{m}$
Row Pitch $\Delta Y_{\text{pixel}}$	39.6 $\mu\text{m}$
Photodiode dim. X $\Delta X_{\text{photodiode}}$	11 $\mu\text{m}$
Photodiode dim. Y $\Delta Y_{\text{photodiode}}$	11 $\mu\text{m}$
Photodiode area	121 $\mu\text{m}^2$
Optical fill factor	9% for C3.1.1-CP-MLO (without micro lenses) >50% for C3.1.1-CP-ML1 (with micro lenses)
Pixel Field Width	11.9 mm
Pixel Field Height	11.9 mm
Max. External Frame Rate	3.8 kHz [2 x 10bit per frame]
Demodulation Frequency (standard firmware)	2 - 250 kHz (equivalent to an internal frame rate of 8k - 1M fps)
Output Resolution	10 bit
Quantum Efficiency $\eta$	20-60% between 330 and 400 nm 60-80% between 400 and 720 nm 60-20% between 720 and 900 nm

Please contact [support@heliotis.ch](mailto:support@heliotis.ch) to discuss your specific application.

Our experts can help with your experiment design.