Photonscore.
PHOTON COUNTING MADE EASY

LINCam

TCSPC Camera

Easy to Use as an Ordinal Megapixel CCD Camera

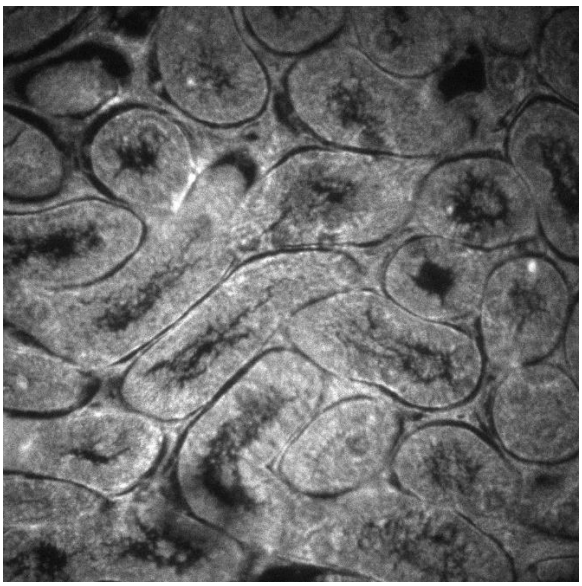
Spatial Resolution ~ 1024 x 1024 Pixels

Temporal Resolution (IRF Width) 50 ps FWHM

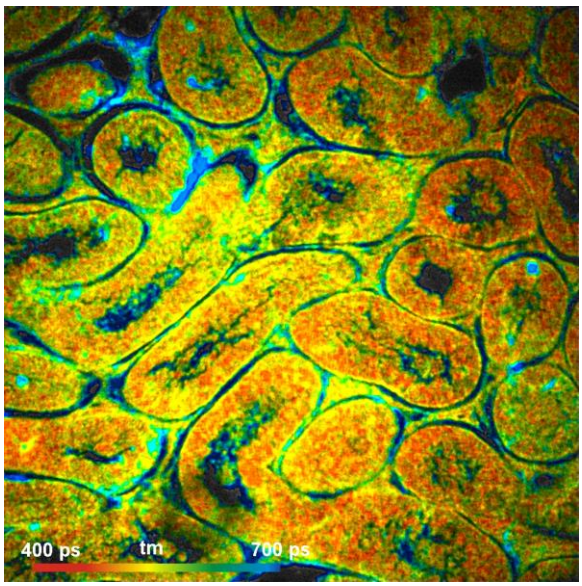
Saturated Count Rate up to 1 MHz

Works with Common Microscope Types

Standard C-Mount or T-Mount Adapter



Intensity image of rabbit tissue



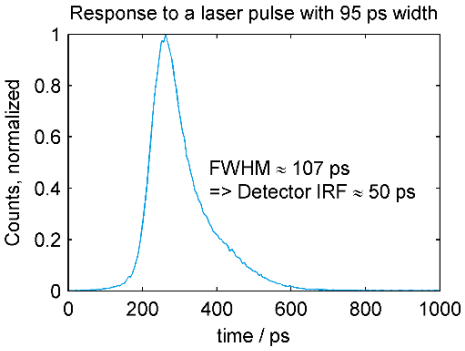
FLIM image of rabbit tissue.

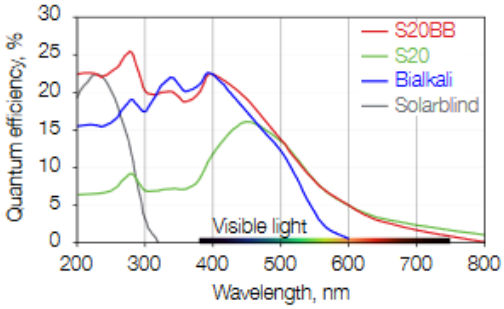
The LINCam system grants single photon acquisition in a wide-field photon counting mode. The core of the system is a position sensitive photomultiplier tube (PMT) based on microchannel plates (MPC's) with a multi-alkali photocathode.

The system comprises of the detector head and the electronic control module designed to be used in lab conditions. The detector head houses MCP-PMT preamplifiers, high-voltage power suppliers and the cooling system. Provided integrated electronic control module includes everything required for robust and reliable single photon counting based imaging. Real-time event selection logic processes registered photons to avoid artifacts like multi-photon events, MCP noise and pile-up effect. The LINCam records the full single photons stream for flexible data analysis. Virtually any spatial and temporal binning can be applied. Frame time can be set to virtually any value to create flexible time lapse movies.

The LINCam is a solution for scanning-free time correlated single photon counting implemented as a camera. This camera resolves x and y positions of individual photons as precise as a CCD with 1024 x 1024 pixels does together with 50 ps accuracy timing. Being paired with a pulsed light source LINCam turns any conventional fluorescence microscope into a powerful lifetime measuring instrument for fluorescence lifetime imaging, time-of-flight-measurements, low-light observations and X-Ray tomography. LINCam with attached off-the-shelf optics is a solution for macroscopic applications like LIDAR. LINCam is as easy as an ordinal megapixel CCD camera but extended with the third timing dimension.

Photonscore. PHOTON COUNTING MADE EASY — LINCam





Specifications

Detector	LINCam25	LINCam40
Active Area Diameter	25 mm	40 mm
Spatial Resolution, Pixels	~ 1024 x 1024 (nominal 4096 x 4096)*	
Temporal Resolution (IRF Width)	50 ps (FWHM)	
Mount	C-Mount	T-Mount
Dimensions (Width x Height x Depth)	145 mm x 78 mm x 50 mm	145 mm x 100 mm x 53 mm
Weight	500 g	600 g
Cooling	Low Noise Air or Liquid	

Acquisition System	Gen2
Max. Count Rate	1 MHz
Dead Time	400 ns
Timing	
Method	TAC + ADC
Min. Bin Width	1.4 ps
Electrical Resolution	6 ps
Number of Bins	max. 4096
Reference Input	Positive or Negative NIM
Time Tagging Resolution	10 ns
Computer Interface	USB 2.0
Operating System	Windows 7/10 64 Bit

*Camera readout delivers a max. of 4096 x 4096 pixels

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