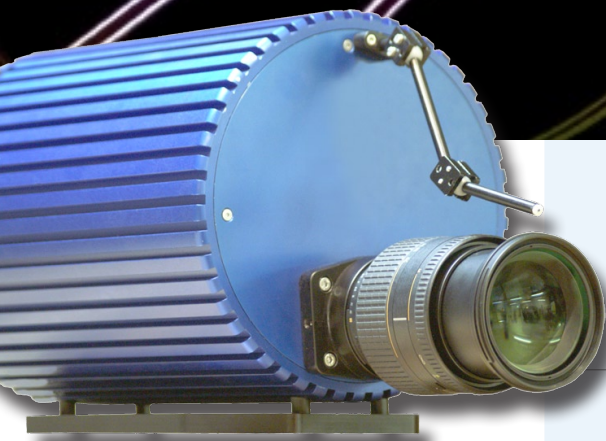


new

Optronis

Make time visible

OptoPIC



Ultrafast Gated Camera

Intensified camera with picosecond gating and high repetition rate.

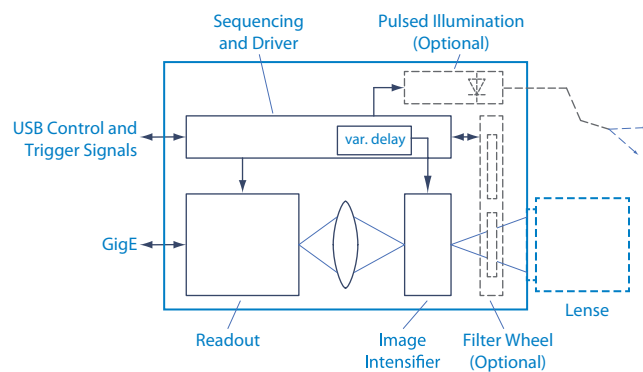
Applications: FLIM, time resolved spectroscopy and fluorescence decay time measurement

- › **Down to 200 ps gate width**
- › **70 .. 110 MHz repetition rate**
- › **Single-Photon Sensitivity**
- › **Self contained**
- › **Full control via LabVIEW®**

Ultrafast Gated Camera

Description

The OptoPIC is an intensified camera with down to 200 ps gating time at high repetition rate. The camera uses a patented image intensifier design combined with ultra high-speed gating electronics to acquire images within extremely short exposure times. The exposure is repeated at ~100 MHz to accumulate a large number of exposures onto a single image. The camera integrates a variable delay line to automatically capture sequences where each image had been captured at a different moment. An optional pulsed illumination and integrated filter wheel simplify system configuration. A LabVIEW application is available to allow variable acquisition modes.



Pulsed Illumination (optional)

Up to 3 pulsed laser diodes with their driver electronics can be integrated optionally into the OptoPIC. Identical or different wavelengths can be selected.

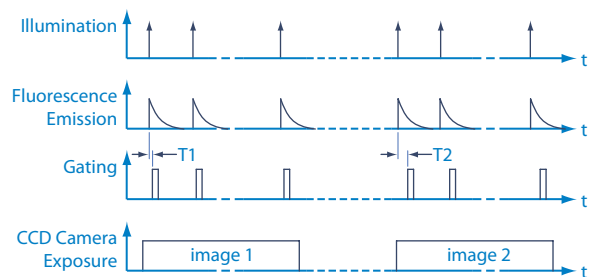
Filter Wheel (optional)

A filter wheel with 7 separate filter positions can be integrated to allow wavelength selection. Combined with pulsed illumination at different wavelengths various multispectral measurements can be performed.

Operation Mode

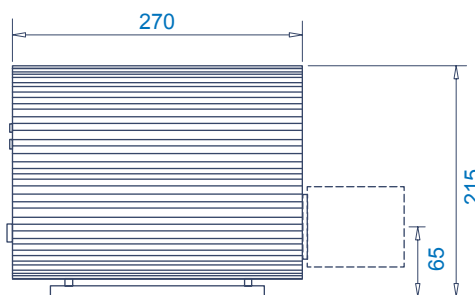
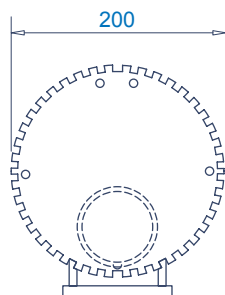
The OptoPIC camera can capture single images with fixed delay time. Each image is a result of a large number of gating intervals integrated on the readout camera sensor.

A sequence of images can be captured with different delay times T_1, T_2, \dots typically used for fluorescence lifetime imaging (FLIM).



Specifications

Gate Width	200 ps .. 1 ns (FWHM)
Repetition Rate	70 .. 110 MHz
Image Intensifier Photocathode	S20 and S25 (others on request)
Operation Modes	Single image with fixed delay / Sequence with variable delay
Frame Rate Readout Camera	up to 10 fps, PC dependent
Active Image Area (typ.)	12 x 12 mm
Resolution Readout Camera (typ.)	700 x 700 pixel
Exposure Time Readout Camera	5 .. 1000 ms
Spatial Resolution	10 lp/mm (min. 7 lp/mm)
Trigger Input	1 Vpp, SMA, 50 Ohm
Trigger Output	>1 Vpp, SMA, 50 Ohm
Filter Wheel (Optional)	7 positions, 12.7 mm dia., software control, not available in combination with C-mount flange
Pulsed Illumination (Optional)	<100 ps Pulse Width, 0..150 MHz repetition rate up to 3 different wavelengths with output diffusor for uniform illumination
Lens mount	Nikon F-mount, optionally C-mount
Dimensions	270 (l) x 200 (diam.) x 215 (h) mm
Weight	3.5 kg typical (without lense and power supply)
Power Supply	100.. 240 V / 12 V with separate AC/DC converter
Environment	+10.. +30 °C, 20 .. 70 % rel. humidity non condensing
Delivery	LabVIEW application, power supply



The information given herein is believed to be reliable, however Optronis makes no warranties as to its accuracy or completeness. Data sheet is subject to modifications at any time. 01/2016