Xenics
Infrared Solutions

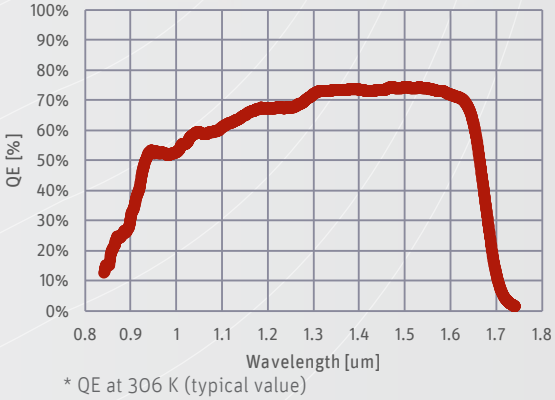
Imagine the invisible

Industrial

Lynx-2048-CL

High resolution, high speed uncooled SWIR line-scan camera

World's highest resolution SWIR line-scan camera with excellent sensitivity



* QE at 306 K (typical value)

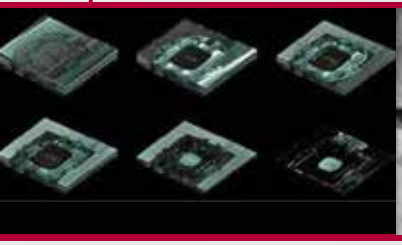
The unique high line resolution achieved by the Lynx-2048-CL will maximize your production yields. This SWIR solution is perfectly suited for spectroscopy, and for non-destructive and detail-rich imaging from deeper layers of semiconductor materials or measuring the thickness and uniformity of its functional layers.

The Lynx-2048-CL offers in many ways an affordable solution. The small form factor and smallest pixel formats from 12.5 x 12.5 µm² square pixels to 12.5 x 250 µm² rectangular pixels allow more precision and optimization of compact systems with lower cost lenses. The high line resolution substitutes for costly multiple-camera solutions.

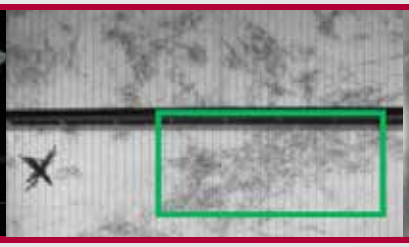
The Lynx-2048-CL is perfectly suited for high speed scanning with high line rates up to 10 kHz. In addition the camera comes with an industry-standard CameraLink interface.

You will reach optimal image with low dark current and excellent signal to noise ratios. Furthermore you can operate multiple integration times.

Designed for use in



OCT: cross-sections MEMS



Semiconductor photoluminescence

Web inspection pharmaceuticals

Thermal imaging of hot objects

Applications

- Food inspection
- Non-destructive testing
- Industrial web inspection
- Semiconductor inspection
- High speed line scan imaging
- Optical Coherence Tomography (OCT)
- Non-contact thermal imaging of (hot) objects

Benefits & Features

- Made in Europe
- Smallest SWIR line-scan camera
- Full flexibility in integration time settings
- Compliant with all CameraLink framegrabbers
- Broad range of pixel sizes, square and rectangular
- Standard CameraLink and extended trigger functionality
- Ultra-high resolution and high sensitivity for low-light conditions

Broad range of accessories available to optimize your system

Lens & filter options

Various focal lengths available

> Discover our Lens Selector Guide
www.xenics.com/LSG

Inputs

Outputs

Software

- Xeneth Basic
- Xeneth Advanced (optional)
- Xeneth SDK (optional)
- Xeneth LabVIEW SDK (optional)

Specifications

Camera Specifications

Imaging performance	
Maximum line rate	10 kHz
Pixel rate	25 MPixels/sec
Exposure time range	Full flexibility in settings from 3 µs to several seconds
CDS	Correlated Double Sampling
Gain settings (16 settings)	Various Settings from 30 fF (HS) till 830 fF (HDR) *
Pixel well depth	From 450 Ke⁻ (HS) till 10 Me⁻ (HDR) *
Gain (in 16 bit)	From 8 e⁻/ADU count (HS) till 225 e⁻/ADU count (HDR) *
Dynamic range	From 280:1 (HS) till 2600:1 (HDR) *
A to D conversion resolution	14 bit
On-board image processing	Configurable single Non-Uniformity Correction (NUC) with intelligent bad pixel replacement; user adjustable fixed offset and gain control
Interfaces	
Optical interface	C-mount with adjustable back focus Mounts easily to spectrometers Otional: U-Mount with adjustable back focus Optional: filter holder
Camera control	CameraLink or Xeneth API/SDK
Image acquisition	Integrate while read (IWR)/ integrate then read (ITR); snapshot acquisition
Trigger	Trigger in and/or out; LVCMOS Modes: free running or user configurable line and frame trigger
Operating mode	Stand-alone or PC-controlled
Power requirements	
Power consumption	+/- 2.6 W
Power supply	12 V DC
Physical characteristics	
Ambient operating temperature range	-40 °C to 70 °C (industrial components)
Storage temperature range	-50 °C to 85 °C (industrial components)
Dimensions	49 W x 49 H x 53 L mm
Weight camera head	< 153 g (lens not included)

(*): Typical values, depending on gain setting
(HS): High Sensitivity mode; (HDR): High Dynamic Range mode

Array Specifications

Array type	InGaAs
Resolution	2048 x 1
Pixel size	12.5 µm x 12.5 µm or 12.5 µm x 250 µm
Spectral band	0.9 * to 1.7 µm
Peak quantum efficiency	≈ 80 % @ 1.6 µm
Pixel operability	> 98 %
Array length	25.6 mm
Array cooling	Uncooled
Dark current	1.5×10^6 e⁻/s ** square pixel array 1.5×10^7 e⁻/s ** rectangular pixel array

(*) Typical Quantum Efficiency (QE): > 40 % at 0.9 µm to 1.7 µm
(**) @ 25 °C sensor temperature (typical value)

Product selector guide

Part number	# pixels	Pixel size (µm²)	Line rate (kHz)
XEN-000314	2048 x 1	12.5 x 12.5	10
XEN-000433		12.5 x 250	

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Xenics
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ISO 9001:2008 certified