

Imagine the invisible

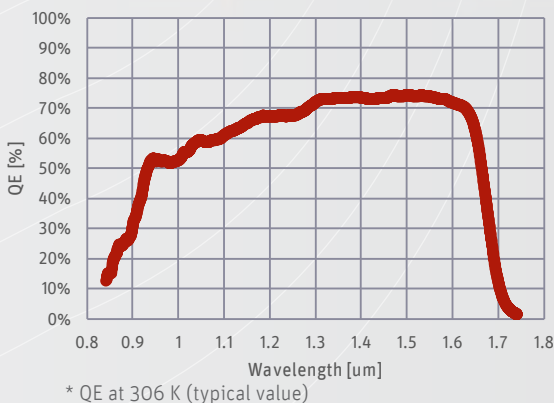
Industrial

Lynx-2048-CL

High resolution, high speed uncooled SWIR line-scan camera



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



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.

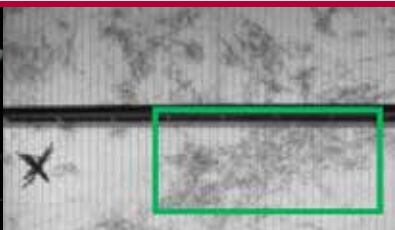
precision and optimization of compact systems with lower cost lenses. The high line resolution substitutes for costly multiple-camera solutions.

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.

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 μm^2 square pixels to 12.5 x 250 μm^2 rectangular pixels allow more

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 (optional F-mount) Optional filter retaining ring available for C-mount only
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 x 10 ⁶ e ⁻ /s ** square pixel array 1.5 x 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 (μm ²)	Line rate (kHz)
XEN-000314	2048 x 1	12.5 x 12.5	10
XEN-000433		12.5 x 250	