

# *IR cameras for Vision and Industrial Systems*

Marc Larive  
Strategic Marketing Manager

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Imaging Camera Systems 14  
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Infrared Solutions

# Xenics activities



“Xenics a supplier of leading-edge infrared solutions”

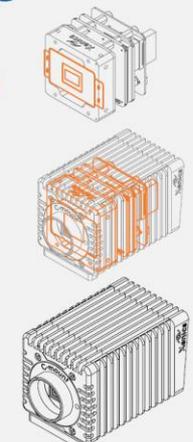
Large portfolio (10 product families) covering different applications including:

- Highest speed linescan SWIR
  - 2k pixels, 256kHz
- Highest speed 2D array SWIR
  - VGA 1,7kHz
- Ultra SWAP VGA LWIR:
  - only 6g, 800mW
  - shutterless

**V**ertically integrated manufacturing

Wavelength 0.9 - 1.7  $\mu\text{m}$

- Fully independent production of InGaAs sensors, cores and full cameras
- 3 levels of customisation to meet your application needs
- Continued R&D to produce breakthrough sensors & cameras



“Xenics designs and delivers several integration blocks”

Visible



0,7 $\mu\text{m}$     2,5 $\mu\text{m}$     3 $\mu\text{m}$     5 $\mu\text{m}$     7 $\mu\text{m}$

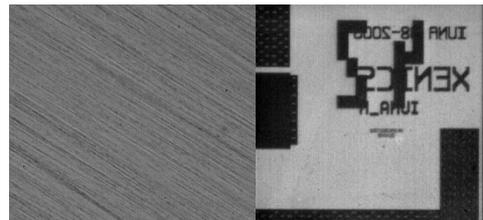


# Infrared vision: a major benefit for customers

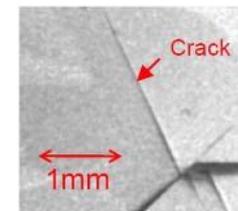


See Inside

SWIR can see through silicon

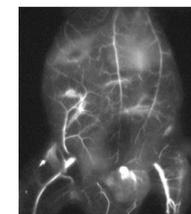


Visible camera SWIR Wildcat camera



See What

Medical: OCT, Fluorescence

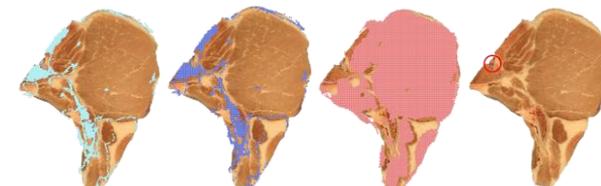


[www.an.shimadzu.co.jp/bio/sai-1000.htm](http://www.an.shimadzu.co.jp/bio/sai-1000.htm)

Food sorting and processing



(Image courtesy of Tomra.)



(Image courtesy of P&P Optica.)

See Ahead

Recycling



Image from CTR

Transport



DENSE  
Gated Camera

Standard Camera

Gated Camera  
Experimental Setup in Fog Chamber  
Visibility 50 m

# Opportunities: identified next steps



- Wavelength extension in SWIR:
  - Visible-SWIR
  - Up to  $1,9\mu\text{m}$  or even  $2,5\mu\text{m}$
- Increase resolution:
  - Trade-off between format and other characteristics
- Adaptation to the specific need:
  - Different form-factor (not the standard 4/3 or linear)
- System cost reduction opportunities:
  - Joint specification of pixel operability (selection of bins)
  - Embedded filters
  - Additional intelligence on the sensor or on the camera

**NEED USERS TECHNICAL + BUSINESS INPUT**



# *THANK YOU*

*Marc.larive@xenics.com*

*www.xenics.com*