




# EYESENTIAL SW™

640 x 512 - 10µm - InGaAs

The Infrared detector designed for industrial applications such as machine vision and spectrometry. LYNRED InGaAs technology provides leading edge performance in terms of sensitivity, noise, dark current and operability.

## SEE BEYOND WHAT IS **VISIBLE**

-  **EASY INTERPRETATION**
-  **VISIBLE LIKE**
-  **ENHANCE SORTER DETECTION CAPABILITY**
-  **DEFECTS DETECTION IN PROCESSING**

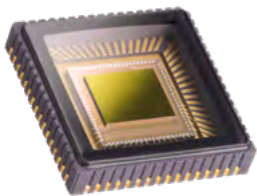
MACHINE VISION

SPECTROMETRY

FIXED SURVEILLANCE

MOBILE SURVEILLANCE





●● SEE BEYOND WHAT IS VISIBLE ●●

**MULTI-PURPOSE**



**VERSATILE**



**LOW NOISE**



**COMPACT**



**EASY  
INTERPRETATION  
VISIBLE-LIKE**

**ARRAY FEATURES**

Format	■ 640x512
Pixel pitch	■ 10µm
Sensor type	■ InGaAs PIN-Photodiode
Spectral response	■ 0.9 - 1.7µm

**ROIC (READ-OUT INTEGRATED CIRCUIT)**

Integration type	■ Snapshot / Global shutter
Charge handling capacity	■ 70 <sup>3</sup> e- / 90 <sup>3</sup> e- / 450 <sup>3</sup> e-
Readout modes	■ IWR, ITR
Exposure time	■ 1 µs minimum
Maximum full frame rate	■ 300 fps full frame, 1200 fps with 320x256 resolution
Maximum pixel rate	■ 100 MPixels/s
Video output	■ Digital 14 Bits
Specific operating mode	■ Individual line selection (for spectrometry)

**TYPICAL PERFORMANCES**

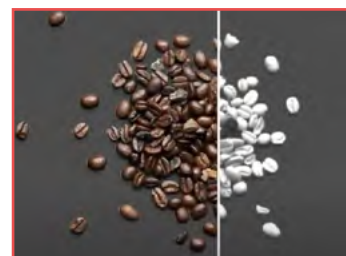
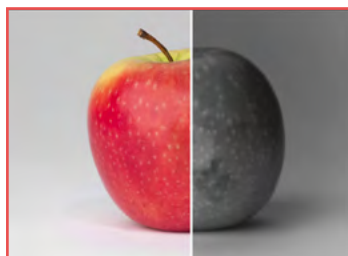
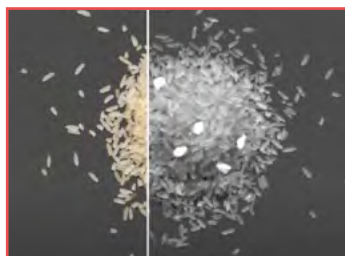
Quantum efficiency (QE)	■ 70% from 1µm to 1.6µm
Noise with ROIC	■ 55 e- (for 90 <sup>3</sup> e- handling capacity)
Dark current	■ 15fA @ 21°C
Array operability	■ >99.5%
Non uniformity without correction	■ 4%

**PACKAGING**

Type	■ Standard LCC / 1.016 pin pitch / 64 pins
Window	■ Borosilicate glass
Operating and storage temperature	■ [-20°C; +60°C]

**AVAILABLE SERVICES**

Technical training and support
Evaluation kit
Electronic and mechanical reference design



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