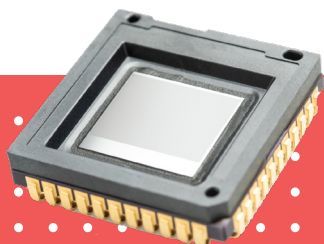




# ATTO640D-02

640 x 480 – 12 μm



Based on continuous customers feedback, LYNRED has improved its 12 μm technology for the ATTO products family.

Ideal for SWaP applications, it is the smallest VGA thermal sensor on the market.

## HIGHER SENSITIVITY FOR LIMITLESS APPLICATIONS



**BEST IN CLASS SWAP CHARACTERISTICS**



**FLUID AND CRISP IMAGES**



**SEAMLESS INTEGRATION**

LEISURE



SURVEILLANCE



DEFENSE

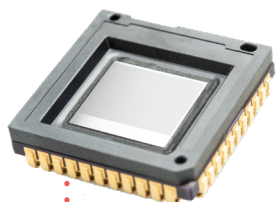


THERMOGRAPHY



# HIGHER SENSITIVITY FOR LIMITLESS APPLICATIONS

## ATTO640D-02



SWaP

IMAGE QUALITY

LOW POWER CONSUMPTION

SEAMLESS INTEGRATION

### BEST IN CLASS SWAP CHARACTERISTICS

Reduced optic size and cost	<ul style="list-style-type: none"> <li>12 <math>\mu\text{m}</math> pixel pitch</li> </ul>
Smallest VGA sensor on the market	<ul style="list-style-type: none"> <li>16.5 x 16.5 mm<sup>2</sup> package</li> <li>With LYNRED wafer-level packaging technology</li> </ul>
Low-power for optimal battery life	<ul style="list-style-type: none"> <li>&lt;300mW @ 60Hz (digital output mode)</li> <li>&lt;150mW @ 60Hz (analog output mode)</li> </ul>

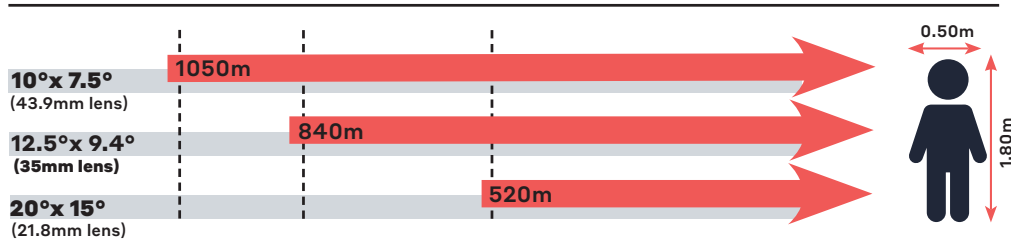
### FLUID AND CRISP IMAGES

Resolution	640 x 480
Sharp contrast	<ul style="list-style-type: none"> <li>Thermal sensitivity : ATTO640D-02 : &lt; 50mK (f/1, 300K, 30Hz) ATTO640D-02+ : &lt; 40mK (f/1, 300K, 30Hz)</li> <li>[-40°C; +85°C] operating temperature range</li> </ul>
Fluid and smooth image	Frame rate up to 60Hz
High uniformity	Operability > 99.8%

### SEAMLESS INTEGRATION

High volume compliant	<ul style="list-style-type: none"> <li>Surface-mount Device (J-Lead44) compatible with standard off-the-shelf socket</li> <li>Wafer-level packaging &amp; high-volume assembly processes</li> <li>Compatible with JEDEC's reflow and handling standards</li> </ul>
QVGA-compatible product platform	<ul style="list-style-type: none"> <li>Footprint compatible with QVGA products: PICO384-053 (17 <math>\mu\text{m}</math>) and ATTO320 (12 <math>\mu\text{m}</math>)</li> </ul>
Flexible configuration	<ul style="list-style-type: none"> <li>Full access to sensor features (I<sup>2</sup>C)</li> <li>Free-run or external trigger mode</li> </ul>
Output format	<ul style="list-style-type: none"> <li>14-bit parallel</li> <li>Analog</li> </ul>

### Human recognition distance with f/1 optics (perfect OTF & 88% typical transmission)



Range for Johnson's criteria @ 50% probability, 2K DeltaT vs background, perfect atmosphere, real LYNRED pixel MTF, sensor NETD = 50mK



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