LUXELL CORE-S
LUXELL CAMERA-S (IP67)

Linear uncooled MWIR readout module with USB output
Affordable solution for direct integration in the production line (IP67-rated)

- Electronic plug-and-play readout module for linear LUXELL FPA 256 px (included)
- Resolution: 256 px (pixel size: 60 μm, pixel height: 600 μm)
- Band of detection: MWIR (1 - 5 microns)
- Peak wavelength of detection: 3.7 microns
- Integration time: 4 - 20 μs, selectable
- Minimum temperature of detection: 100 °C
- Maximum scanning rate: 300 lines per second (@minimum integration time)
- Mechanical shutter for 1-pt offset
- Start-up time: < 5 seconds
- Communication interface: USB 2.0 full speed
- Data transmission: raw data, 14 bits
- Power: 1W (USB powered, 5 VDC, 200 mA)
- CORE-S dimensions (in mm) / weight (grams): 56.0 (L) x 44.5 (W) x 41.5 (H) / 60 g
- CAMERA-S mechanical housing:
  - Alluminum housing, with CS-mount optics interface, rear USB connector (industrial M12x1, mini-USB, IP67-rated), tripod screw hole and water block
  - Housing dimensions, in mm: 70.0 (L) x 72.5 (W) x 50.0 (H)
  - IP67-rated when assembled properly with IP67-rated lens
- CAMERA-S lens:
  - CS-mount, f=35 mm, F#1.1, FoV = 25°(h) x 1°(v) (detachable)
  - Field of Regard (@1m) = 440 mm(h) x 17 mm(v)
- CAMERA-S size with housing, water block and lens: 70.0 (L) x 131.5 (W) x 50.0 (H)
- CAMERA-S weight (grams): 400 g
- Software included:
  - NIT SOFTWARE SUITE (Acquisition and visualization SW), LabVIEW SDK
- Industrial applications: industrial welding process monitoring, laser manufacturing process monitoring, machine vision, spectroscopy, glass manufacturing
**LUXELL CORE-S module**

Dimensions (mm):
- Width: 56 mm
- Height: 4 mm
- Depth: 44.5 mm

**LUXELL CAMERA-S (IP67)**

Lens, CS-mount:
- f=35 mm, F#1.1

USB 2.0 connector

Dettachable water block

**LUXELL FPA**

- FPA resolution: 256 pixels
- Uncooled operation
- Band of detection: MWIR (1 - 5 um)
- Peak detection wavelength: 3.7 um
- D* (WLpeak) (typ): 2x10^9 Jones
- Silicon window with AR coating
- Response time: 2 us
- Pixel size: 600 x 60 um²
- Pixel pitch: 60 um
- Readout method: x-y multiplexed
- Readout electronics: not included (CORE-S compatible)
- Dimensions (mm): 24x24x2.2
- Biasing voltage (typ): 5 V
- Pixel resistance (typ): 0.2 - 1.0 MΩ
- Packaging: SMD / LCC68 footprint
- Pinout: 68 pins (32 in use)

**Main facts**
- Maximum added value and affordability
- Miniaturized compact size to ensure a full integration in the Industry 4.0 applications and Factories of the Future production lines

**Typical applications**
- Industrial manufacturing process control (welding, cutting, etc.)
- Laser process monitoring
- Gas and flame detection
- Machine vision
- Spectroscopy
- OEM integration

**Industries of use**
- Automotive industry
- Home appliance manufacturing
- Metallurgy and steel industry
- Petrochemical industry

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