LUXELL CORE-S front view

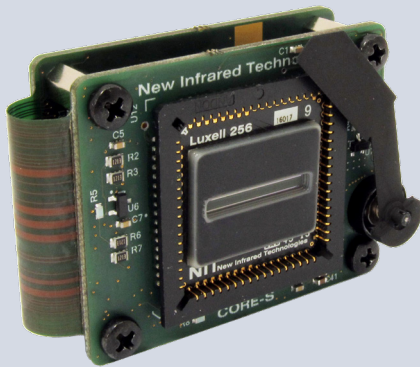*LUXELL CORE-S rear view*

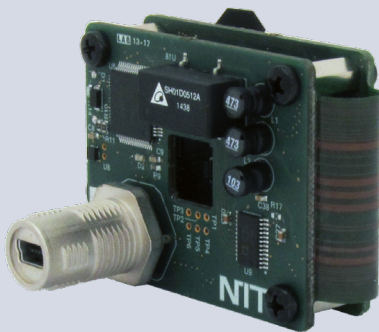*LUXELL CAMERA-S*

LUXELL CORE-S
LUXELL CAMERA-S (IP67)
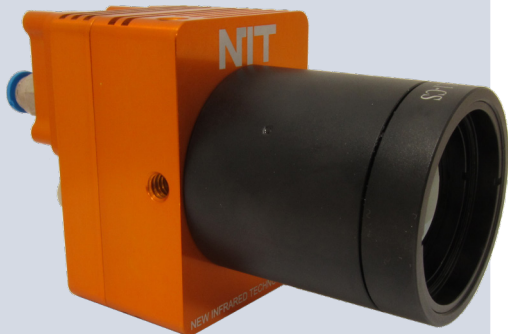
Linear uncooled MWIR readout module with USB output

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 um, pixel height: 600 um)
- ▸ 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 ºC
- ▸ 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 = 25º(h) x 1º(v) (dettachable)
    - ▸ 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

Industrial process control (welding, cutting, etc)
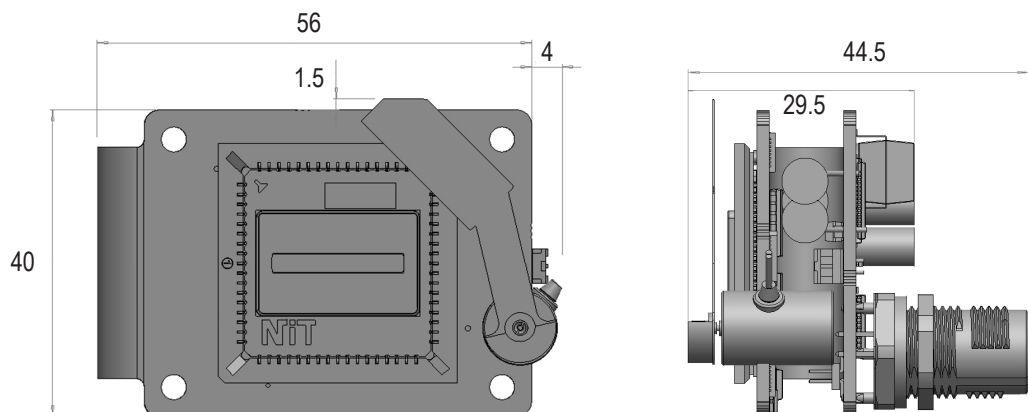

Laser process monitoring
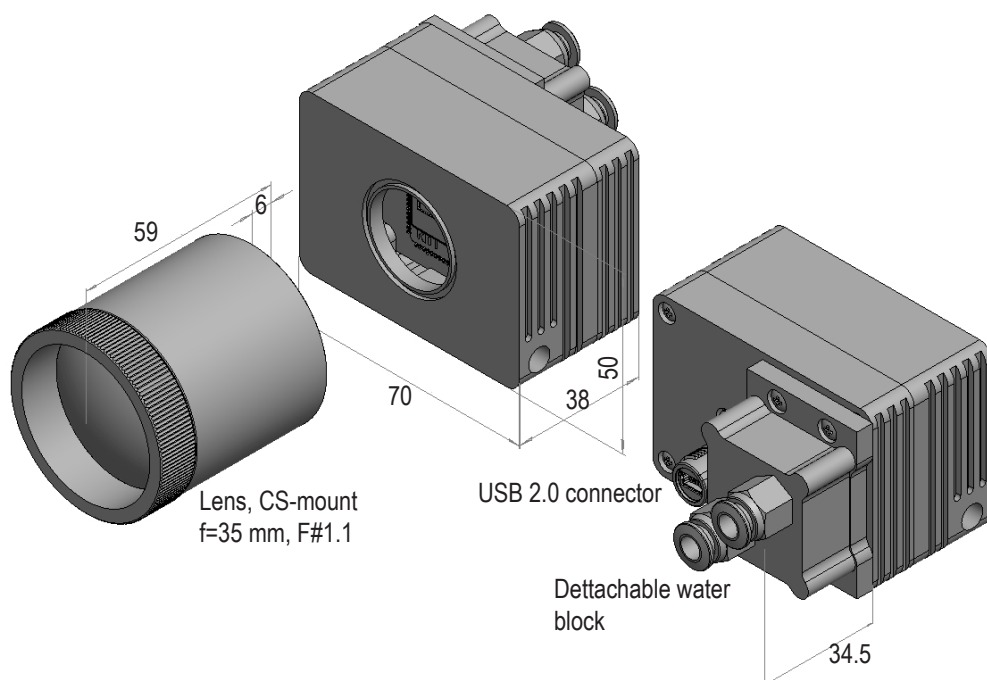

Spectroscopy and gas detection

Glass manufacturing quality assurance

NIT
New Infrared Technologies

LUXELL CORE-S module

56

1.5

4

40

44.5

29.5

All dimensions in mm

LUXELL CAMERA-S (IP67)

59

6

70

38

50

34.5

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

USB 2.0 connector

Dettachable water block

◉ROHS✓

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*
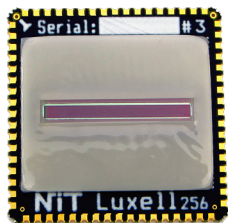
Typical applications

▶ *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*

LUXELL FPA

▶ FPA resolution: 256 pixels
▶ Uncooled operation
▶ Band of detection: MWIR (1 - 5 um)
▶ Peak detection wavelength: 3.7 um
▶ D* (WLpeak) (typ): 2×10^9 Jones
▶ Silicon window with AR coating
▶ Response time: 2 us
▶ Pixel size: 600×60 um^2
▶ 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)

NiT
New Infrared Technologies