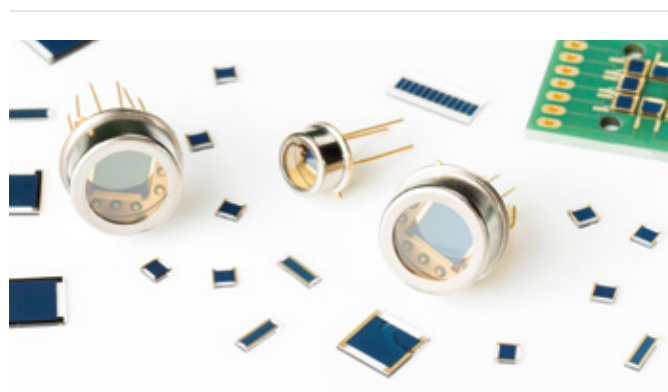


trinamiX high-performance IR detector portfolio

Taking your application to the next level

Accurate detection and classification of substances and materials are critical – in industrial and consumer applications alike. Optical sensing technologies are at the forefront to meet the most challenging demands thanks to flexible integration in combination with robust and contactless measuring abilities.

Enhance your application with our PbS and PbSe near-infrared detectors, arrays and array modules



✔ Versatile applicability

Our PbS (1 – 3 μm) and PbSe (1 – 5 μm) near-infrared detectors excel in various applications and industries, such as:

- Flame monitoring
- Gas detection & analysis
- Temperature monitoring
- Photospectroscopy
- Flame & spark detection
- Spectroscopy
- Moisture measurement

The unique features of our detectors paired with customizable configurations enable flexible integration

✔ High stability and long lifetime

Patented thin-film encapsulation allows for maximum protection.

✔ Full flexibility with patented bare chips

Easy to integrate and fully compatible with your manufacturing processes.

✔ High sensitivity

Increased detection capability under room temperature conditions.

✔ Made in Germany

As a subsidiary of the largest chemical company in the world, our products are developed and manufactured with outstanding chemical expertise and highest dedication to quality in Ludwigshafen.



Watch our presentation

Integrated Material Sensing Solutions
for Industrial and Consumer Applications

Our high-performance IR detector portfolio

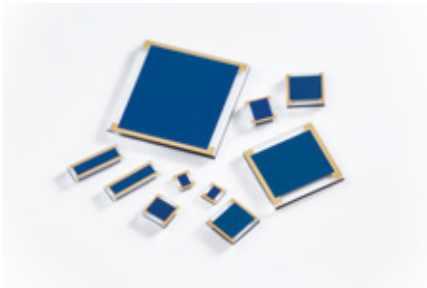
long lifetime | high detectivity | small footprint

Single-Pixel detector

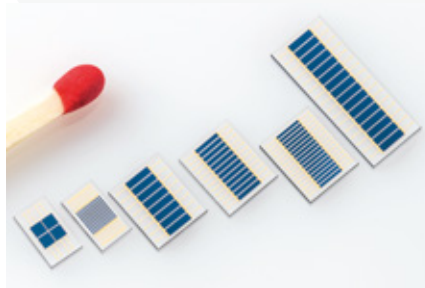
Multi-Pixel detector

Arrays and array module

Bare chip detectors



- Spectral range: 1 to 5 μm
- Ready for pick and place
- Wire-bondable chip
- Unique thin-film encapsulation



- Spectral range: 1 to 5 μm
- Pixel numbers from 2 to 16
- Line or matrix design
- Highest integration factor



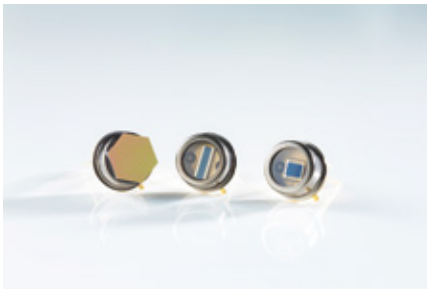
- Spectral range: 1 to 3 μm
- 256 pixels
- Pixel pitch of 50 μm

Single-Pixel detector

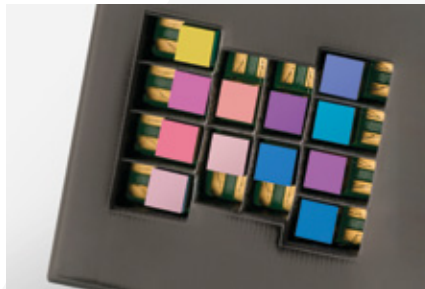
Multi-Pixel detector

Arrays and array module

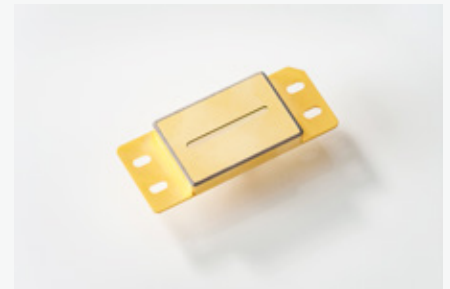
Packaged detectors



- Spectral range: 1 to 5 μm
- Double encapsulation
- Increased safety, robustness, and compatibility
- Different filters and thermoelectric coolers available



- Spectral range: 1 to 5 μm
- Individual housing
- Integrated optics or filters



- Spectral range: 1 to 3 μm
- Read-out electronics
- Hermetic PS28 package incl. thermoelectric cooling
- Sapphire window

trinamiX NIR Spectroscopy Solution

Model SYS-IR-R-P

Spectroscopic specifications

Spectral range	1450 – 2450 nm
Spectral resolution	1 % of wavelength, e.g. 15 nm at 1500 nm

Optical Components

Detector	256-pixel PbS line array detector
Lamp Module	6 Tungsten halogen lamps Lifetime > 100.000 scans Replaceable by user



Physical specifications

Dimensions	152 mm x 84 mm x 42 mm
Weight	570 g
IP class	IP65 dust- and waterproof (splash and jet water)

Environmental conditions

Operating temperature	0 °C – 40 °C / 0 °C – 30°C for charging
Storage temperature	-20 °C – 60 °C
Air humidity (non-condensing)	20 % – 80 % (operation) / 20 % – 90 % (storage)
Height above sea level	≤ 2000 m
Type of use	Indoor and outdoor (operation), indoor (charging)

trinamiX NIR Spectroscopy Solution

Model SYS-IR-R-P

Electrical specifications

Power Input (for charging)	USB PD with 15 VDC, max. 2.75 A via USB type C connector
USB-Connection (for stationary use)	USB 2.0 communication via USB Type C connector
Wireless connection (for handheld use)	Wireless low energy via integrated antenna

Battery

Type	Rechargeable lithium-ion battery
Model	Friwo FB3S1P18650-26
Nominal voltage	11.1 V
Nominal capacity	2600 mAh
Charging current	1300 mA
Transport classification	UN class: 9 UN number: 3480, Lithium Ion Battery Energy of battery: < 100 Wh

RF Module

The device contains the following radio frequency (RF) module:

Type	Würth Proteus-I AMB2621 / 2608011024000
Frequency range	2.44 GHz
Max. output power	Typ. – 2 dBm, max. 0 dBm