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Ludwigshafen, June 3, 2019

trinamiX at the SENSOR + TEST 2019: Innovations in Distance Measurement, Object Recognition and Infrared Sensing

- trinamiX Fiber Sensor: World's first fiber optic sensor to measure distances
- trinamiX Imaging System: 3D object recognition for robotics and face recognition
- Hertzstück ™: Infrared detectors for 1 - 5 µm wavelength

trinamiX showcases its product innovations in 3D and infrared sensing at the SENSOR + TEST, the leading forum for sensors, measuring and testing technologies worldwide, in Nuremberg from June 25 – 27, 2019. Visit us at booth 1-364 in hall 1.

Distance measurement: trinamiX Fiber Sensor

The fiber optic sensor from trinamiX combines for the first-time, the properties of classic fiber sensors with precise, absolute distance measurement. Until now, fiber optic sensors were only able to detect the presence of objects. The novel fiber optic sensor measures distances, precisely, robust, and fast – even in challenging environments.

trinamiX unique measurement principle based on beam profile analysis is independent of object surface properties and highly robust against lighting conditions. The separation of measurement head and electronics allows measurements even under challenging conditions such as high temperatures or vacuum. This is especially relevant for hygienically demanding processes in food processing or pharmaceutical packaging. The compact design of the measurement head makes it perfect for space constrained applications. It enables existing machines to be upgraded to add distance measurement, e.g. in factory automation, process control or Industry 4.0-type data-based production environments.

trinamiX fiber optic sensor is nominated for the AMA Innovation Award 2019. This award, bestowed every year by the AMA Verband für Sensorik und Messtechnik e.V. (AMA Association for Sensors and Measurement), is among the most coveted prizes in sensor and measuring technology. The winners of the AMA Innovation Award 2019 will be announced on June 25, 2019 at the opening ceremony of the SENSOR+TEST 2019.

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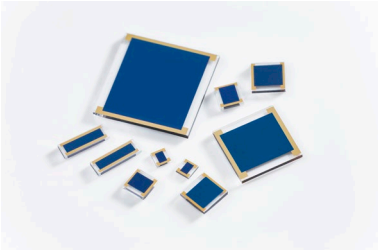
Object recognition: trinamiX Imaging System

The imaging system from trinamiX consists of a standard CMOS sensor and an infrared light projector. It enables the real-time capturing of 2D image, 3D depth information and a unique material classification. Material classification enables e.g. the differentiation of skin from other materials for high-confidence biometric face authentication. All three features (2D image, depth and material classification) are quickly captured and with the same standard CMOS sensor. The analysis is done with proprietary algorithms that turn the standard hardware into a robust and powerful imaging system.

Various applications are possible: In the industrial area, the imaging system is used in robot control for bin picking. Fill level or volume measurements as well as gesture control in cars are also possible. trinamiX imaging system has been miniaturized for the integration into smartphones where it improves current methods for face recognition: The system not only provides 2D and 3D information, but also a material classification and thus adds another authentication layer to face recognition.

More information on www.trinamix.de

Hertzstück™ Infrared Detectors



The lead salt detector (PbS and PbSe) Hertzstück™ is an infrared detector for 1 – 5 µm wavelengths. Hertzstück™ detectors are protected by a novel thin-film encapsulation that ensures high stability and long lifetime. The detectors can directly be wire-bonded on PCBs. They do not require cooling as their detectivity at room temperature meets the highest demands. The detectors can be customized and are available as bare chip, in TO encapsulation with and without cooling, in different geometries and pitches as well as with or without filters. trinamiX guarantees 100% quality control before delivery to ensure the highest product standards.

New in our portfolio: Multi-Pixel and Arrays

Hertzstück™ Multi-Pixel detectors consist of 2 to 16 pixels in line or matrix design. The multi-pixel detectors are used in simple spectroscopic applications, e.g. in-line quality control, providing a cost-effective way to reliably monitor wavelengths in the range of 1 - 3 µm.

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For applications with higher resolution requirements, the Hertzstück™ array with up to 256 pixels is ideal. The array can also be customized and integrated directly on PCB. This enables new, smart applications, e.g. spectrometers in kitchen and household appliances, in agriculture and in food processing. With miniaturized handheld spectrometers, the laboratory will come to the sample and no longer the sample into the laboratory.

As a standard product trinamiX offers a PbS array module in the PS28 package. An evaluation kit for easy testing of the PbS array is also available.

New in our portfolio: PbSe Detectors for wavelength from 1 – 5 µm

In addition to the PbS detectors, trinamiX also offers PbSe detectors. These cover a wide wavelength range up to 5 µm. Thanks to their fast response time and high sensitivity, the Hertzstück ™ PbSe detectors are suitable for applications such as gas analysis, spectroscopy, process control or temperature monitoring. The PbSe detectors are also protected by thin-film encapsulation and can be wire-bonded directly to printed circuit boards. The small size of the Hertzstück ™ detectors enables the use of PbSe detectors in new, miniaturized applications, and of course also in mass production.

More information on www.hertzstueck.de

About trinamiX

trinamiX GmbH based in Ludwigshafen was founded in 2015 and is a wholly owned subsidiary of BASF SE. As a start-up, we are operationally independent and at the same time have access to the expertise and experience of BASF Group. What drives us? With our technologies we strive to enable humans and machines to capture and understand the world - for improved decision-making and security. With a team of 80 experts from different fields, we are developing and selling 3D and infrared sensing technologies. Our production and development facility is in Ludwigshafen/Rhein, Germany.

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