

Press Release

InfraTec GmbH Infrarotsensorik und Messtechnik

Dresden, 13/10/2022

The New Generation SWIR Infrared Cameras

High-resolution, radiometrically calibrated for temperatures from 300 °C – ImageIR® 8100 & ImageIR® 9100

The SWIR infrared cameras ImageIR® 8100 and ImageIR® 9100 are especially developed for thermographic measurement tasks which are characterised by very high temperatures and challenging materials. Both thermography systems work in the short-wave infrared range (SWIR) and expand the portfolio of thermographic temperature measurement from InfraTec. They offer new possibilities and allow for example emissivity-optimised measurements of temperatures on metallic surfaces in high temperature applications between 300 °C and 1,700 °C. Other areas of application include additive manufacturing and laser applications, as well as welding processes and press hardening in the metal industry.

What's inside the new thermal imaging cameras?

The SWIR infrared cameras ImageIR® 8100 and ImageIR® 9100 are radiometrically calibrated with (640 × 512) and (1,280 × 1,024) IR pixels in VGA and SXGA image format respectively. Both have a pixel pitch of only 5 µm which results in small detector chip diagonals. This allows a comparatively affordable, compact optical design with high imaging quality. In combination with radiometric calibration, brilliant thermographic images with high geometric and thermal resolution can thus be achieved in both formats. Even the smallest geometric and thermal details on large-area objects can be optimally resolved in the SXGA format. Combining the system with interchangeable lenses of different focal lengths allows convenient adaptation to real measurement scenarios.

As the cameras do not require a mechanical cooler, they are suitable for maintenance-free continuous operation. The new InfraTec SWIR cameras provide users with thermographic cameras that are equipped with high measurement accuracy as well as very good short- and long-term stability.

Compact, robust and uncomplicated

Its modern interface concept enables convenient camera control and data acquisition in full-frame format up to 237 Hz. In combination with the control and analysis programs of the IRBIS® 3 software family, the new SWIR infrared cameras from InfraTec are a versatile tool for numerous monitoring and measurement tasks.

Compact design and low weight make the ImageIR® 8100 and ImageIR® 9100 SWIR infrared cameras ideal for integration into existing system environments. Even under adverse environmental conditions, the ImageIR® 8100 and ImageIR® 9100 deliver full performance, as both models are extremely robust. With the associated Software Development Kit (SDK), all functions of the cameras are easily accessible.

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About InfraTec

The InfraTec infrared sensor and measurement technology company was founded in 1991 and has its headquarters in Dresden, Germany. The privately held company employs more than 200 employees and has its own design, manufacturing and distribution capabilities.

Infrared sensors, with electrically tunable filters based on MOEMS, count among the products of the infrared sensor division, next to spectrally single and multi channel infrared detectors. These detectors can be used in gas analysis, fire and flame sensor technology and spectroscopy.

With its infrared measurement business unit, InfraTec is one of the leading suppliers of commercial thermal imaging technology. In addition to the high-end camera series ImageIR® and the VarioCAM® High Definition series, InfraTec offers turnkey thermographic automation solutions.

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Fig.: The new SWIR infrared cameras for high temperature applications.

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