

# Press Release

InfraTec GmbH Infrarotsensorik und Messtechnik

Dresden, 06/04/2020

## **Significant Increase in Performance – Frame Rate Exceeds 100 kHz Limit Advanced High-speed ImageIR® 5300 Infrared Camera Offers Even More Performance When Recording Thermal Images of Extremely Fast Thermal Processes**

For some years now, the ImageIR® 5300 has been the top model in terms of temporal resolution within the high-end camera series ImageIR® from InfraTec. This special position is attributable to its detector. Its sensitive elements are larger than those of conventional detectors and are arranged at a distance of 30 µm. As a result, the model has an enormous thermal sensitivity of 0.015 K. This excellent signal-to-noise ratio is accompanied by integration times of less than 10 µs for technically relevant object temperatures. Thereby frame rates of up to 105 kHz can be realized. For this reason, the infrared camera is predestined for the solution of measurement and testing tasks, in which extremely rapid thermal processes are to be captured and recorded.

An example of this is the analysis of combustion processes. Others can be found in various areas of research. Questions concerning aerodynamics and flow technology in the field of aerospace and applications, in which laser technology is used, are linked to such high frame rates.

High temporal resolution also plays a role in the analysis of wearing processes within the automotive industry. In this area, the ImageIR® 5300 also demonstrates the strengths of its concept. The automated Thermal Rotate Check (TRC) IR rotation test system from InfraTec provides the framework for this. As part of this, the infrared camera supports the precise analysis of fast rotating components such as tyres and brakes. The results of such analyses provide important information about how well the test objects withstand continuous operation, which signs of wear are present and how serious they are, and which mechanisms cause them.

### **High-speed and even more**

The improved frame rate of the ImageIR® 5300 ensures that users can use this model to solve a wide range of tasks in industry and science. Their modular design consisting of an optics, detector and interface module makes it easy to adapt to a wide variety of measurement scenarios. The integrated process and trigger interface enables the infrared camera to be synchronized precisely with external processes for analyses – and in the case of the ImageIR® 5300, these processes can readily be connected at maximum speeds.

#### Headquarters

InfraTec GmbH  
Infrarotsensorik und Messtechnik  
Gostritzer Straße 61 – 63  
01217 Dresden / GERMANY

Phone +49 351 871-8630  
Fax +49 351 871-8627  
E-mail [thermo@InfraTec.de](mailto:thermo@InfraTec.de)  
[www.InfraTec.eu](http://www.InfraTec.eu)

#### USA office

InfraTec infrared LLC  
5048 Tennyson Pkwy.  
Plano TX 75024 / USA

Phone +1 844-226-3722 (toll free)  
E-mail [thermo@InfraTec-infrared.com](mailto:thermo@InfraTec-infrared.com)  
[www.InfraTec-infrared.com](http://www.InfraTec-infrared.com)

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**Information:** 2,397 characters (incl. spaces)

### About InfraTec

The InfraTec infrared sensor and measuring technology company was founded in 1991 and has its headquarters in Dresden, Germany. The privately held company employs more than 230 employees and has its own design, manufacturing and distribution capabilities.

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.

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

### Contact

InfraTec GmbH  
Infrarotsensorik und Messtechnik  
Gostritzer Str. 61 – 63  
01217 Dresden / GERMANY

Phone +49 351 871-8630  
Fax +49 351 871-8727  
E-mail [presse@InfraTec.de](mailto:presse@InfraTec.de)  
Internet [www.InfraTec.eu](http://www.InfraTec.eu)

### Images



High-speed infrared camera ImageIR® 5300 from InfraTec

INFRAtec.

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Phone +49 351 871-8630  
Fax +49 351 871-8627  
E-mail [thermo@InfraTec.de](mailto:thermo@InfraTec.de)  
[www.InfraTec.eu](http://www.InfraTec.eu)

#### USA office

InfraTec infrared LLC  
5048 Tennyson Pkwy.  
Plano TX 75024 / USA

Phone +1 844-226-3722 (toll free)  
E-mail [thermo@InfraTec-infrared.com](mailto:thermo@InfraTec-infrared.com)  
[www.InfraTec-infrared.com](http://www.InfraTec-infrared.com)