
The Company



Since 1991, the InfraTec GmbH has been developing and manufacturing innovative infrared detectors and infrared measuring systems. Thanks to stable growth, the company belongs to the leading suppliers of detectors and measuring technology for infrared spectral range worldwide. Development and manufacturing take place in Germany, at the site in Dresden. Separate branches and offices in the USA, Great Britain and China coordinate international sales. InfraTec currently employs a workforce of more than 230 people, which includes about 15 % in research and development.

1.1 History of the Infrared Sensor Division

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| 1990 | The managing directors Dr. Matthias Heinze and Dr. Matthias Krauß start the engineering company InfraTech GbR |
| 1991 | InfraTech GbR becomes InfraTec GmbH Infrarotsensorik und Messtechnik;
Entry into the market with compact pyroelectric multi channel detectors for gas analysis |
| 1993 | InfraTec moves into larger business premises at the site of TechnologieZentrumDresden and installs a complete assembly line for pyroelectric detectors |
| 1995 | The first edition of the product catalog is published |
| 2000 | For more production capacity, the Sensor Division moves into an additional manufacturing building |
| 2001 | Market launch of miniaturized multi channel detectors with integrated beam splitter – PYROMID |
| 2004 | InfraTec presents detectors with integrated CMOS operational amplifier and low acceleration response |
| | |
| 2006 | More than 100 employees work at InfraTec |
| 2007 | Founding of the subsidiary InfraTec infrared LLC in the USA |
| 2010 | The Fabry-Pérot detector receives the "SPIE Prism Award" for Photonics Innovation |
| 2012 | InfraTec establishes its application bureau in China; the number of staff at HQ in Dresden exceeds 200 |
| 2013 | The portfolio includes detectors with operational amplifiers using single supply technology |
| 2015 | Soldering technology for a hermetically sealed detector housing goes into series production for anti-reflective coated silicon substrates |
| 2016 | Miniaturization of the PYROMID series: Presentation of the innovative stack design of the LRM detectors |

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2017	The LRM series is offered in all housings (TO46 / TO39 / TO8)
2019	The world's first pyroelectric eight-channel detector in a TO8 housing, LRM-278, is introduced; completion and move into the new clean room and office building
2020	InfraTec in the Covid-19 pandemic: short-term change of production to realize the increased demand for CO ₂ detectors for respirators; development of the low-power multi channel detector LRM-274 for flame detection
2021	InfraTec celebrates 30 th anniversary; the sensor division develops and manufactures the first 4-channel digital detector – PyrIQ® – for easier system integration
2022	The PyrIQ® digital detector series has been extended by a compensated 2-channel detector in a TO39 housing
2023	Soldering technology is also available for IR Narrow Bandpass filters

1.2 Philosophy



Pyroelectric detectors are often the sensory core components of gas analysis systems and flame detectors. Optimum devices mostly require specially customised solutions. InfraTec's particular strength lies in its understanding and consideration of your requirements from our products. We see ourselves as your partner and we know that our success is always based on that of the customer. For this reason, it is very important to us that you are involved in new development projects and a long-term collaboration as early as possible. With products from InfraTec you benefit from established as well as new, innovative solutions. The products you require are

developed and manufactured exclusively in Germany – Made in Germany in the best sense. You can count on our support worldwide, whether by our German and international sales team or by technically experienced contact persons at our headquarters in Dresden.

Equipment and organisation of manufacturing allow us to manufacture both small and very high quantities of products within an acceptable period of time. An interdisciplinary technology team with a high level of expertise in assembly and packaging technology oversees the entire production process and ensures that all parameters are complied with.

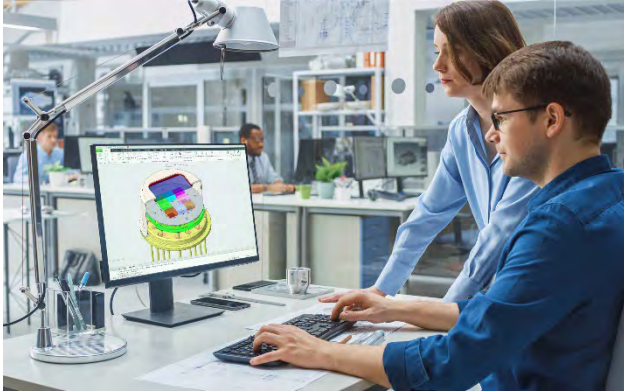
Quality is considered here our highest priority like everywhere else in our company. Prior to delivery, every detector undergoes a final inspection for signal and noise, is given a serial number and its own measurement record. In conjunction with the recording during the production process, you can trace back each product in detail at any time. Of course we are certified according ISO 9001.

An essential key factor to successful cooperation with you are our qualified and motivated employees. We promote ongoing specialised training and a good working atmosphere.

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1.3 Profile

1.3.1 Research and Development



New products with improved features, even entire product lines based on completely new concepts, can only be developed in an efficient R&D team. Early identification of future trends and preliminary development independent of daily operations are just as much a part of this strategy as technological development that provides the basis for effective production. Measuring technology for testing the features of our products is developed in-house. InfraTec utilises the latest research findings and collaborates with universities, Fraunhofer institutes and other partners. Innovations like the spectrally tuneable MOEMS based detectors with Fabry-Pérot filters, which have been

awarded repeatedly by international associations, impressively testify to the success of such collaborations. Our specialists have many years of experience with the properties, application and processing of pyroelectric materials, in the electro-optic and electro-mechanical design of pyroelectric detectors, sensor-based signal processing and measuring technology. Thanks to good understanding of the preferred applications of our detectors, we are able to offer you optimum solutions for your applications.

1.3.2 Production



The detectors are manufactured in an ESD-protected cleanroom of class ISO 7 with an area of 1,000 m². All equipment for the entire manufacturing process is available – starting with the pyro-wafer coating through to the welding of the metal housing. In addition to automatic systems for the PVD processes, adhesive application as well as chip and wire bonding, semiautomatic and manual workstations complete the production in order to effectively manufacture very large quantities as well as small batches and samples.

To ensure high availability and process reliability, production and development engineers collaboratively supervise each individual process. The same equipment is also used for product and technology development. This guarantees fast and reliable implementation of development results in the production

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1.3.3 Quality



Defined manufacturing conditions in accordance with DIN EN ISO 9001:2015 and detailed traceability for all components of each manufactured detector are the basis for the high quality of our products. All supplied components and materials first undergo an incoming goods inspection. Subjects are electric, geometric and spectral properties. Each stage of production includes process-related testing steps. Thus, pull and shear tests are performed during wire bonding and the ball geometry is measured. Gross and fine leak tests indicate whether the finished detector is leak-proof. Optoelectronic measurements of the detector parameters and intermediate measurements before cap welding as well the final

measurement are made before packing. The measurement data is archived, thereby ensuring traceability of every single detector by means of the serial number. With each detector you receive a test report containing the most essential measurement data of the detector. In addition, a declaration of conformity is enclosed, which explains how to apply the relevant provisions and guidelines, such as RoHS and REACH. InfraTec only uses such materials in certain quantities that are not subject to any restrictions of use.