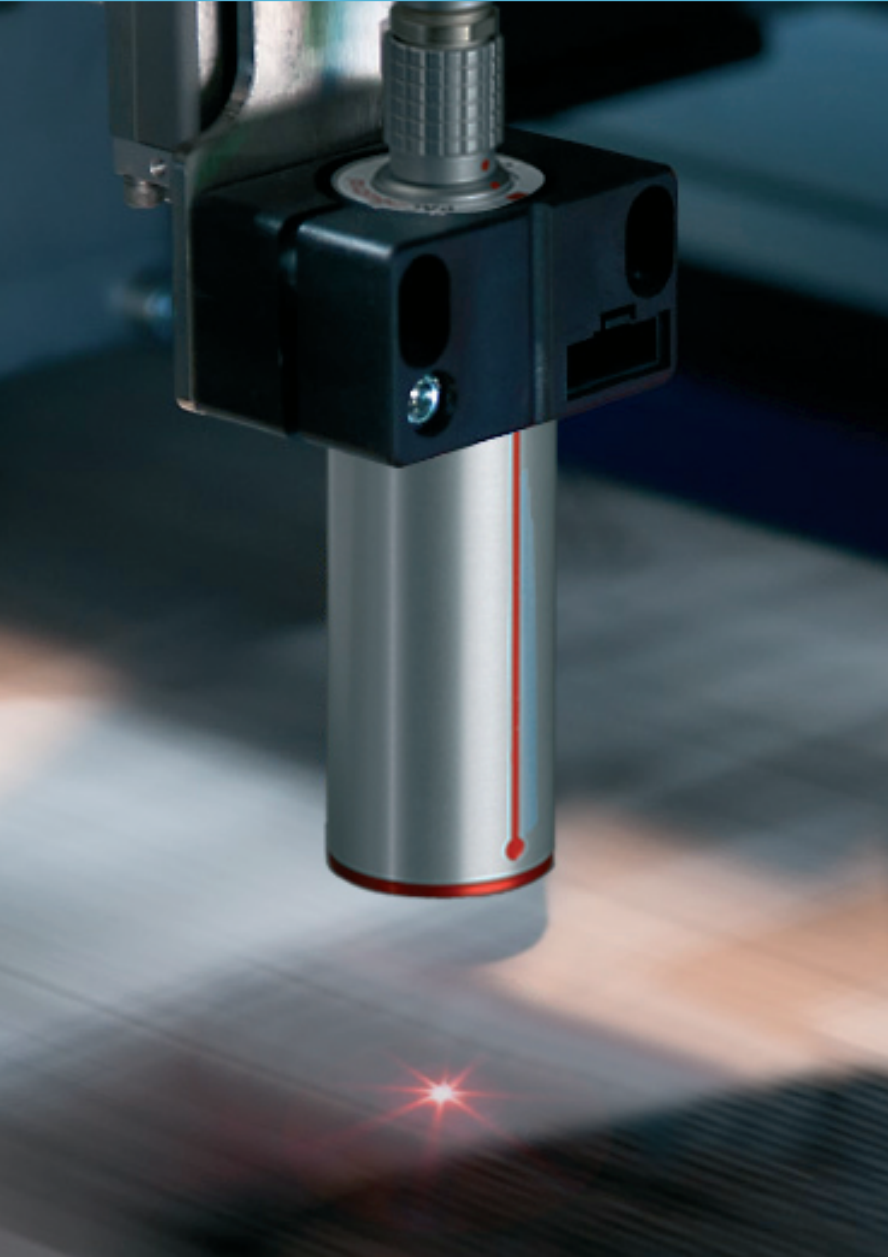


25  
YEARS

OptiSense

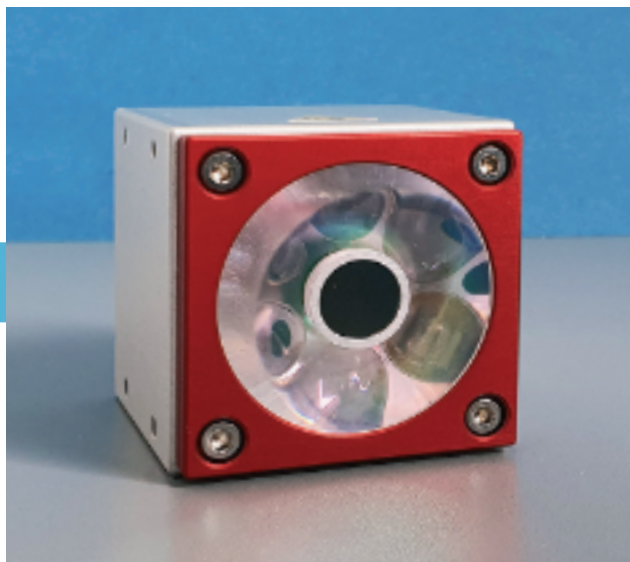


*Contactless, fast and ultra-precise*

## **Automated coating thickness testing in industrial facilities**

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The latest offshoot among the PaintChecker sensor family is called Cube, and it expands the industrial model line.

As a miniature cube, the LED sensor can be installed in the production line without a mount.

*Miniaturization is our main focus*

## **Our next generation of automated measurement technology**

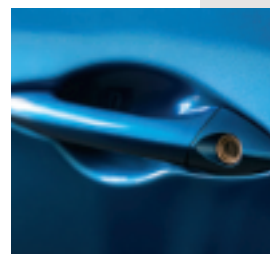
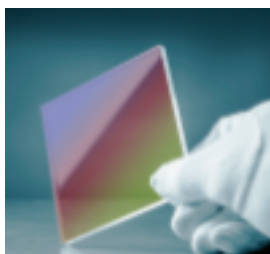
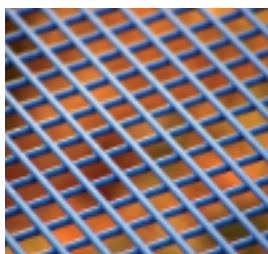
### **Contactless, fast and efficient**

Whether in the automotive sector, medical technology or the electrical industry: coating thicknesses are being measured everywhere in order to make processes faster and more precise. This increases quality and lowers costs – provided that, in line with to the production process, quality control can be optimised at the same pace.

That is why powerful and fully integrated measurement technology is important. And this is exactly where OptiSense comes in: we offer you tailor-made solutions from compact single-sensor systems to inline high-power measuring systems with multiple sensors – all of them contactless, fast and highly precise.

### **Maximum miniaturization**

Often little things are key to success – especially when systems are getting more and more complex and demands are ever increasing. OptiSense has already set standards in the past, and has repeatedly pushed the limits of what is technically feasible. With our miniaturized, contactless PaintChecker LED and laser sensor heads, it is now possible to carry out measurements in the production line that were previously unthinkable, even in the laboratory. Since we develop and manufacture all sensor heads in-house, we are able to offer you innovative solutions for even most exceptional applications.





*With major portions of oven production have long been fully automated, using the highest precision and speed. This increases quality and lowers costs – provided that the quality control system also works optimally. An optimum coating thickness measuring solution not only impresses with contactless, automated detection on a wide variety of substrates, but is also easy to operate and delivers highly precise measurement results.*

*Sophisticated technology*

## **Seamless integration across all production levels**

### **Always have the entire process in sight**

We team up with you to develop reliable coating thickness measurement solutions that are not only economical and precise, but also make your work as easy as it can be.

From the development laboratory, to the production line, to the final inspection – once measurement data and calibration parameters have been obtained, they can be seamlessly reused at all production stages – reliable, reproducible and precise.

Whether wet or cured coatings, whether curved surfaces, corners or edges with complex shaped parts – with our systems, you can detect even the smallest deviations very early in the process, and thus avoid waste or expensive reworking. At the same time, these improved quality measures reduce the material consumption, as well as they save resources and protect the environment. Furthermore, the entire coating process is completely documented – and you can lie back and focus on what really matters: perfect products.

# OptiSense

# Lean and agile



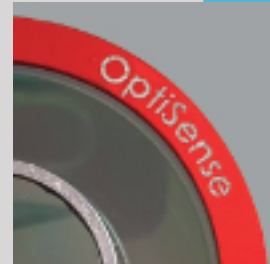
*On the safe side*

## **Robot-supported measurements across all industries**

The sign of a perfect finish is a flawless look and optimal protection. To achieve this, automatic painting lines apply several coating layers wet-on-wet without intermediate drying. After each pass, robots check the fresh paint contact-less at a large number of positions. Just seconds remain to approach the measurement position and carry out the measurement. This is an ideal application for our miniature sensors. Weighing in at just 150 grams, they can be mounted on fast, lightweight robots that can handle high production rates.

But paints are no longer used for decorative purposes alone. For example, the battery cells of electric cars are insulated with a coat of paint that needs to reliably prevent short circuits and thus protect the entire battery from scorching. The coating thickness is therefore a safety-relevant parameter that needs to be carefully monitored. All measurement points have to be checked in just a few seconds – exactly the right task for our PaintChecker Industrial, which can run up to eight sensors simultaneously.

Nowadays, paints are used in the most extreme of environments – even in ovens. A glass-ceramic powder material is used that withstands temperatures of 500°C – if the coating thickness is correct. The thick, still soft powder layer is contactless tested, and re-coated if necessary. For such cases, OptiSense offers sensors in a high-power version that can deal with thick, solid layers and, in addition, allows for a greater distance between coating and sensor.



*The flexible all-rounder*

## **PaintChecker Industrial**

Whether paint, powder or glaze, rough or smooth, cured or immediately after application, the OptiSense PaintChecker Industrial measures coating thicknesses quick, contactless and fully automated in continuous industrial operation. There is a proper sensor for every application and every installation situation.

For rough surfaces, models with a large sensing field are ideally suited while sensors with tiny measuring points are optimized for micro-mechanical applications. The sensor models featuring the patented LARES® technology are eye-safe, and can be operated without further protective measures. All sensors are incredibly easy to install and are predestined for robot applications due to their low weight.



*Today the industry demands for sensors that are attractively priced, are easy to integrate and operate, and can perform extremely precise measurements at a multitude of points. At the same time, they must be able to communicate intelligently and effectively with PLCs or central database systems.*

*Random sample testing, which is often used in large-scale production, is particularly critical for safety-relevant components, since undetected defects can lead to catastrophic failures. It is therefore not sufficient to adhere to an acceptable quality limit; rather, every defective component must be identified and rejected. This is what OptiSense is for.*



*Easy budget management and saving potential*

## **The perfect service portfolio for your measurement needs**

With our services, you can leverage all the advantages of professional coating thickness measurement for your own products – without any investment costs! This offers your company enormous optimization potential by accelerating research and development and expanding quality assurance. The bottom line is significantly less material consumption and, most important, considerable cost reduction.

Our flexible, contactless measuring systems offer several types of sensor heads with different light sources for every aspect of coating thickness measurement – completely in line with your individual needs. We create a reasonable and efficiently coordinated measurement concept provided as a complete solution from a single source, which can be adapted and enhanced at any time.

The experience and knowledge you gain during service measurements also makes it easier for you to select a suitable measurement system when planning investments for your individual measurement task. If you decide on purchasing your own coating thickness measuring system, our service portfolio will support you over the entire life cycle of the systems: we provide calibration, maintenance and repair services at various service levels. This means predictable, low expenditures while assuring to keep high performance levels at all stages of the production process.

## *The strengths of our service team*

### **Professional all-round service throughout the entire life cycle**

We support your measurement tasks from day one: starting with a detailed consultation, we are ready to perform all feasibility checks, and, to solve even complex and extremely challenging measuring tasks, in close cooperation with our customer. And our service portfolio still does not end here.

The on-site installation of the measuring system and its commissioning are another among the strengths of our speedy service team. Thanks to our many years of experience, we have uniquely comprehensive expertise in data measurement. We can determine the metrological specifications in special applications and draw up comprehensive measurement reports.

Not only does OptiSense investigate the required parameters, but we also provide complete problem solutions through detailed analysis. As a result, you get a comprehensive and high-quality coating measurement system that is indispensable for new developments, process optimisation, quality control and damage analysis.



## *Process optimisation and spare use of resources*

### **Precise contract measurement as a resource-saving solution**

Regardless of whether you are a beginner in measurement, whether you have a wide variety of measurement tasks to be solved, or whether you run a company that rarely has need of coating measurements you can take advantage of professional surface measurement for your own parts. Our experienced and well trained employees will be happy to assist you in measurements and analyses – in our laboratory and on site. In the meantime, you can free up your human resources for your core business.

Regardless of whether the current coating quality of your production line is to be determined, a new installation is to be run in, the product is to be changed or the coating process is to be statistically examined: you can rely on our experts.

Our high-precision surface measurements allow you to perfect your production quality – as a service exactly where and when you need it.





# OptiSense. At your service, worldwide.



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