

OptiSense succeeds in squaring coating thickness measurement

## What is probably the world's smallest LED cube sensor guarantees a seamless coating thickness test along the entire process chain

Cube, the latest sensor in the PaintChecker family, adds two LED variants to the industrial model line. The cube-shaped mini-sensor now allows coating thickness measurement and calibration data captured while out and about in the factory to be transferred continuously to the automated production line.



### PAINTCHECKER CUBE

The LED sensor got its name "PaintChecker Cube" because of its miniaturised cuboid shape. With its robust aluminium housing in the mini 50 x 51 x 55 mm format, the PaintChecker Cube is significantly smaller than a Rubik's Cube.

Depending on the coating material, you can choose between the PaintChecker Cube with infrared or UV excitation.

The new LED sensors have a larger measuring field than the laser models and are particularly suitable for rough and powdery surfaces of powders and pastes. Of course, measurements on non-metallic surfaces are also possible using the robust, photo-thermal test method. Users have a choice between the PaintChecker Cube with infrared or UV excitation, depending on the coating material being tested.

### Smooth interaction across all process stages

Industry 4.0 is all about the networking of data, but, to date, 97% of field data has not been used at all. This also applies in the field of coating thickness measurement, largely because this data has not been simple to transfer from the laboratory to industrial production. What was previously only possible with laser sensors is now also offered by OptiSense's LED technology: data and calibrations obtained during development can

now be seamlessly reused for measurements in the production line. The industrial LED sensors also have the benefit of automatically delivering precise results and allowing workers to intervene promptly in the manufacturing process.

### The OptiSense Cube in numbers

At 1 mm, the long-life LED sensor currently offers the largest measuring spot in its category. It has been optimised to measure coating thicknesses under the harsh conditions typical of powder processes without making any contact. Due to its exact measurements, the PaintChecker Cube increases product quality and keeps possible rejects to a minimum. Measured values or calibration settings, collected from laboratory applications, can then be almost instantly connected to the intelligent analysis software.

The LED sensors need less than half a second per coating thickness measurement to monitor the process seamlessly and reliably. The measuring distance from the lens is 33 mm with a measurement range of 1 to 1000 µm. Thanks to the semiconductor light source, the new LED sensors provide maximum service life, energy efficiency and vibration resistance. The industrial PaintChecker Cube also scores points for its low weight of 150 grams, which is ideal for robot assembly. Like all LED sensors from OptiSense, these latest sensors are also eye-safe.

### Easy to install and integrate

Thanks to the miniaturised cube design, the new LED industrial sensor can also be easily integrated into extremely cramped production environments. With its robust, yet miniature aluminium housing (50 x 51 x 55 mm), the PaintChecker Cube is significantly smaller than a Rubik's Cube. The PaintChecker Cube is also highly manoeuvrable because the compact sensor can be mounted with a high degree of flexibility, thanks to the ability to align the cable connection as required. What's more, the large contact surface ensures optimal heat dissipation.

"Our LED Cube is the smallest cube sensor on the market," Thorsten Merfeld, Product Manager at OptiSense, says with a bit of pride. "But it's not just the miniaturised dimensions of the housing that impress. When it comes to contactless testing of coating thicknesses, using the new sensor means a reliable, seamless process from the laboratory to production and through to quality control."

Regardless of whether a project involves a large measuring distance, high levels of measuring accuracy, a fast measuring rate or a small installation area, the wide range of OptiSense system options can be integrated into almost any client-specific application to optimise processes, increase availability and significantly reduce production costs.

## Everything from a single source: maintenance services for precise budgeting

"A product is only as good as the service behind it" is a principle that still applies. That is why OptiSense's support is more than a free telephone hotline. The company offers its clients all-round service, from consulting and project planning to installation support and measurement point assistance. This also includes regular monitoring of test equipment as well as customised calibrations for new combinations of materials and analysis of measuring equipment capability. Clients can choose among various options to put together a package that best meets their needs. The advantage is that all equipment is professionally maintained and repaired, costs are known in advance and the client is able to conserve its own resources.

With OptiSense as their partner, clients always have access to comprehensive and high-quality services that are of inestimable value for new developments, process optimisation, quality control and damage analysis.

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