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HOENLE EXTENDS UV SCAN MACS DOSE MEASUREMENT SYSTEM WITH NEW LED STRIP

New measurement strips for Hoenle UV Scan MACS bring patented phosphorescence technology to LED-UV applications for the first time, enabling precise dose measurement for wavelengths from 365 to 395 nm.

Hoenle, a leading provider of industrial UV technology headquartered in Gilching near Munich, is expanding its UV Scan MACS dosimetry system with a new strip variant designed specifically for LED-UV systems: the macsStrips 950 LED. This gives users of LED-UV curing systems access, for the first time, to the same precise measurement technology already well established with UV Scan MACS for conventional mercury vapor lamps in the 20–700 mJ/cm² dose range.

UV Scan MACS was developed by Hoenle together with technology partner PRUUV and is regarded as the world's first UV dosimetry system based on delayed phosphorescence. It replaces conventional color-change indicator strips, which are known for their sensitivity to storage conditions and can therefore become unusable before use or unknowingly deliver incorrect readings. The system consists of two components: the macsReader readout unit and the self-adhesive, flexible macsStrips sensor strip.

Purpose-built for LED-UV light sources

The new macsStrips 950 LED are specifically tuned to the LED wavelengths commonly used in practice (365, 385, and 395 nm) and cover a dose range of 60 to 950 mJ/cm². This allows the dose actually delivered by an LED-UV system to be measured directly on the substrate, an advantage that is particularly valuable for LED systems: the substrate-based measurement approach enables local evaluation of individual areas within a UV-LED array, making visible intensity variations that blanket measurement methods cannot capture.

The measurement is based on a patented delayed-phosphorescence principle: each strip is individually calibrated before use, reliably compensating for variations arising from production or storage. During the actual measurement, the strip absorbs part of the previously calibrated reference dose; the macsReader then calculates the actual applied UV dose from the difference — reproducible and independent of the time of measurement.

High storage stability and comparability with the industry standard

Unlike conventional color-change strips, macsStrips require no refrigeration and are insensitive to ambient light and humidity, remaining stable for more than twelve months under standard room conditions. Comparative measurements also demonstrate a linear 1:1 correlation of UV-A/B/C values with the established industry standard Power Puck II, while requiring significantly less space.

This allows macsStrips to be used in applications where the Power Puck II reaches its limits due to space constraints, such as printing and coating applications and on 3D surfaces.

Data stays offline

The macsReader stores up to 2,000 measurements locally on the device, with no smartphone or cloud connection required. For further analysis, data can be exported as a CSV file via USB. Users benefit from a solution that combines data privacy, independence, and ease of use in day-to-day production.

The macsStrips 950 LED are available immediately and complement the existing UV Scan MACS portfolio. Further information about the system, along with technical documentation, is available at <https://www.hoenle.com/products-solutions/product-categories/process-monitoring/uv-scan-macs/>



Caption: Hoenle UV Scan MACS UV dose measurement system with new LED strips

Photo: Hoenle

Note: The photographic material may only be published in connection with the associated press release.

About Hoenle:

Hoenle AG is the parent company of a group of UV specialists and one of the world's leading suppliers of industrial adhesives and UV Technology. The publicly listed company is based in Gilching / Munich and develops, manufactures, and markets UV/LED-UV systems and equipment, UV lamps, and UV measuring technology for various application fields worldwide. The business is divided into three units:

The **Business Unit Curing** develops, produces, and distributes curing and drying technology for industrial printing, converting and coating applications. The product portfolio comprises systems and solutions based on UV, LED-UV, IR/hot air as well as inert UV systems and peripheral equipment.

The **Business Unit Disinfection** offers system solutions for disinfecting air, water and surfaces with UVC and xenon pulsed light as well as microbiological analyses, which are used in the food industry, for example. An in-house lamp production facility supplies customer-specific lamps.

The **Business Unit Adhesive Systems** comprises solutions for bonding applications in industrial manufacturing processes. These include adhesives and sealants as well as suitable UV and LED-UV curing devices.

In addition to **international subsidiaries** in China, Korea, France, Great Britain, Austria, Malta, and the USA, as well as a sales office in Italy, the group has a **dense network of distribution partners** worldwide.

A **comprehensive service offering**, consisting of service technicians stationed around the world, decentralized spare parts warehouses and the option of augmented reality-based remote service, ensures that customers' production processes are sustainably supported.