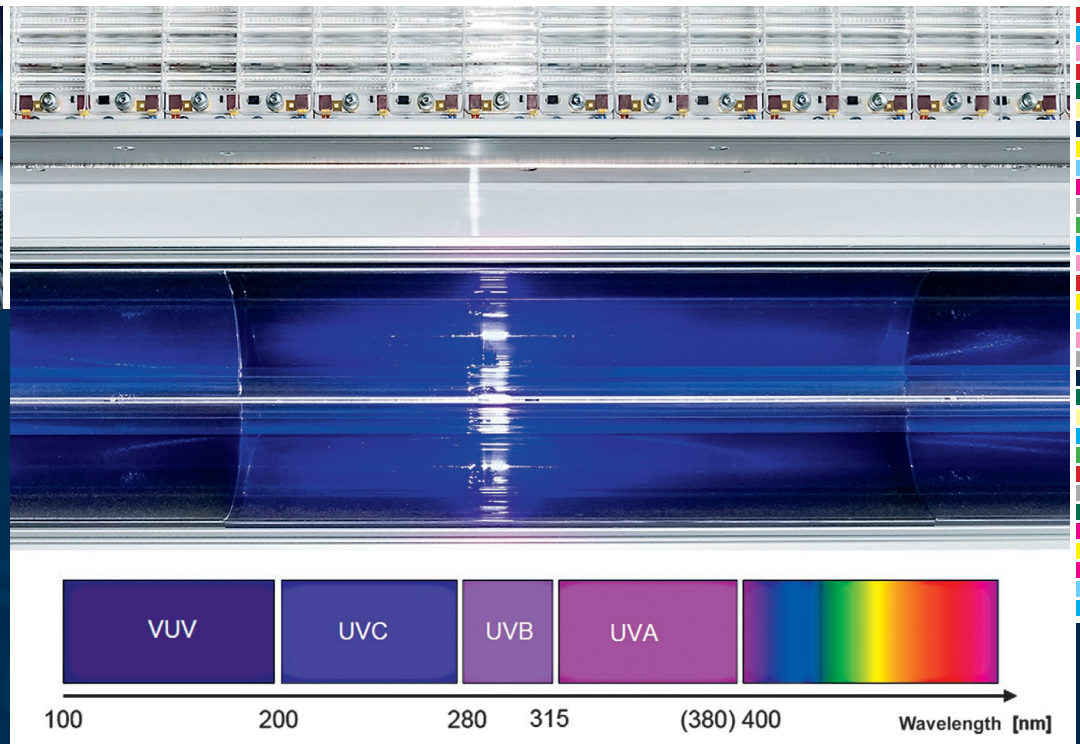
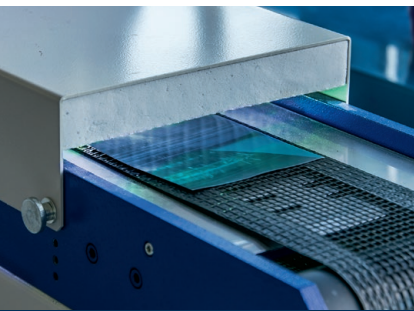





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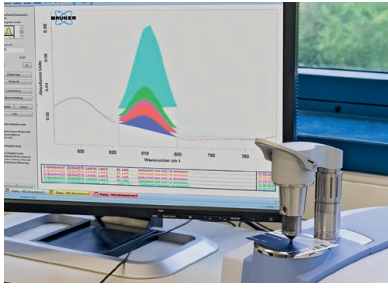
# Efficient and Reliable Production with UV Inks

Optimisation by controlling the lamp output and  
measuring the curing degree of inks and varnishes



-  **Optimum print quality  
and colour reproduction**
-  **Monitoring lamp output  
and curing performance**
-  **Efficient use of energy through direct  
measurement on the printed product**





# Your Proof of Reliability in the UV Process

## Controlling the Curing Process

To provide you with greater reassurance in these cases, we carry out curing measurements using FTIR spectroscopy in our testing laboratory or the UV Curing Tester UV CURE CHECK. These measurements provide you with a reliable assessment of the curing degree of the tested print products. The UV CURE CHECK is also suitable for use directly at the printing press. This allows you to check the curing degree of the prints directly during the production process and to take corrective action if necessary.

## Optimisation of the Process Parameters

The curing of printing inks, inkjet inks and coatings using UV irradiation is an efficient technology that can be used to process a wide range of substrates and achieve a high degree of finishing. We can determine the optimum lamp settings for you and identify when cleaning or early maintenance of the lamp modules is necessary.

This approach offers several advantages, as the irradiation reaching the print under real production conditions can be measured. Fluctuations due to substrate distortions or shadowing caused by moving machine parts can be detected in this way. This allows us to check whether the level of UV irradiation is sufficient to cure the inks and coatings used. Detailed analyses can also be carried out on the homogeneity of the UV irradiation over the entire sheet surface and on the influence of different printing conditions such as substrates and printing speeds. The goal is not only to ensure reliable curing of the inks and varnishes but also to optimise energy consumption.

With regular testing, the condition of the UV LEDs can be continuously monitored and a decline in performance due to aging or contamination can be quickly recognised.

## Dosage Measurement for UV-LEDs

A dosage measurement is required to assess the irradiation amount that actually hits the printed product and triggers the curing process. The commercially available measuring strips for measuring the dosage of mercury-vapour lamps cannot be used for UV LEDs, as they only absorb in the range from 200 to 350 nm. The spectrum emitted by LEDs with the wavelengths of 365 / 375 / 385 / 395 nm cannot be recorded with these strips. For this reason, SID has developed new measuring strips specifically for this range.

The strips are fixed on a sheet in the feeder pile and evaluated after passing through the printing press to assess the colour change caused by the UV irradiation.



SID is a non-profit industry-oriented research institution, development partner and service provider for the graphic arts and processing industry and its associated machine manufacturing industry.

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