

HYCURE UV, LED & EXCIMER



A HIGH PERFORMANCE COMBINATION OF WELL-KNOWN CURING TECHNOLOGIES.

Increasing customer and market requirements make synergies of different curing solutions necessary again and again. Conventional UV systems, complete or in component form, are well regarded in the printing, coating, bonding and inkjet sectors. UV lamp systems are used as a high-energy UVC source, especially for high and versatile requirements. This offers excellent scratch, impact and wear resistance. In addition, UV systems score with short curing times, immediate further processing, high gloss levels for coatings as well as robust chemical resistance.



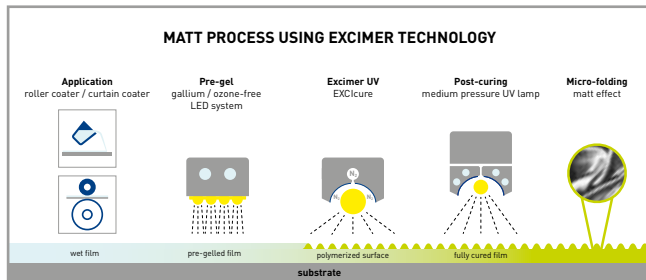
LED technology has also developed into a true alternative solution in the field of light curing. This is due to the following core properties: immediate readiness for use, low heat input, high efficiency, energy-saving potential, long service life and compact design. The simple integration, the absence of ozone and mercury as well as the lack of heat radiation also speak for a broad application of the technology in the field of industrial curing. The compact systems have a long service life and the LEDs can be controlled in zones depending on where light is needed on the substrate.

The LED/UV duo has been used in the graphic arts industry for several years, as has Excimer/UV in converting. High-energy excimer technology is used in many industry sectors and applications. Excimer stands for „excited dimer“ and is very useful mattifying by means of excimer, an interaction of all

three technologies is required in the pre- and post-treatment stages. For example, when treating a wood or wood-like substrate, LED technology is first used to pre-gel the topcoat. This increases the viscosity, making it easier to matt. Especially when mattifying high coat weights, LED technology makes mattifying with excimer technology possible in the first place. LED technology also ensures soft-touch and anti-fingerprint effects.

To avoid absorption by atmospheric oxygen, surface coatings are irradiated with the short-wave and high-energy excimer emission (172 nm) under a protective gas atmosphere (inert). Nitrogen is used for this purpose. As a result of the irradiation, polymerisation occurs in the uppermost layer of the coating. A thin hardened film forms on the surface. Since the polymerisation also causes shrinkage, the film near the surface has micro-folds, resulting in a

matte surface. The deep and final curing of the coating takes place downstream with conventional UV medium-pressure lamps. The use and interaction of all three technologies is required in flooring applications (parquet, laminates etc.) as well as in furniture applications (MDF boards etc.) and in the decorative film sector.



SMART CONTROL – USER-FRIENDLY, INTUITIVE CONTROL OF THE UV SYSTEM

The key to the effective use of all three technologies lies in precise process monitoring and control. Complex and intelligent application solutions require seamless interaction between UV, LED and excimer. All new product generations of the IST METZ Group can be equipped with the Smart Control system user interface. This makes the operation of the UV systems clear, easy to operate and enables uncomplicated integration into the control system of all common types of printing presses.

With their high-resolution colour display and large memory, the touch panels are predestined for all the more complex control tasks required by modern press installations.

CONTROL BENEFITS:

- Intuitive operator guidance & clear menu structure
- Important operating states such as lamp pre-selection, shutter open/closed, start-up, production and cooling phase can be seen at a glance
- Malfunctions are signalled by colour change and text message
- Fast setting through group adjustment
- Reproducible print jobs through recipe storage
- Error history is stored
- Data export via USB interface
- Format settings for LED systems
- LED systems work without a shutter, are ready for use immediately after switch-on
- Format settings for LED systems



The main menu of the Smart Control touch panel

WE HAVE THE CURE

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