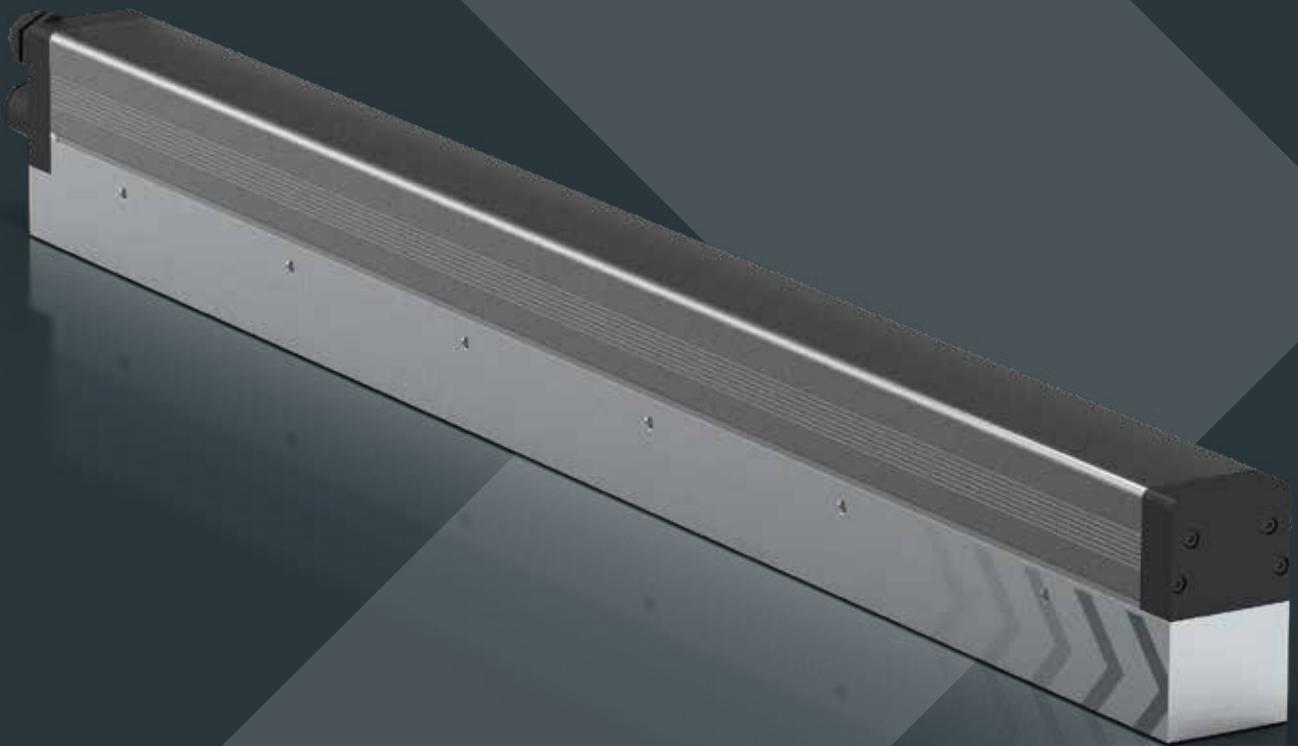


*modulux*  
by IST METZ



*modulux turbo*

# LED UV +

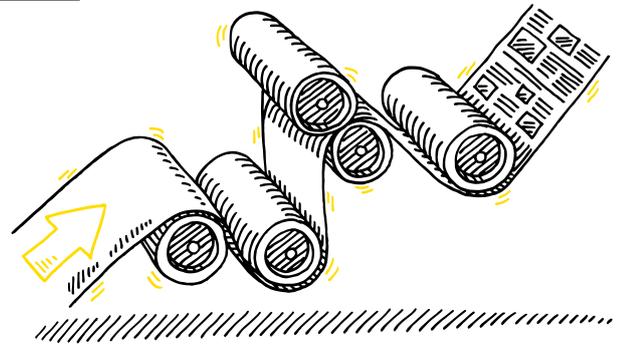
## **... is economical:**

- minimised processing time due to dry sheets
- long service life of LEDs
- no warm-up and cooling-down times, immediate availability
- no powder, extended cleaning intervals
- protective varnish is not required
- cost-saving due to format switching
- lower ink consumption compared to conventional printing inks



## **... is suitable for retrofitting your printing press:**

- lower investment
- quicker return on investment
- shorter installation times than other drying systems
- significant machine value increase due to retrofit
- successful certification and recertification to PSO/ISO 12647 possible



## **... extends your range of applications:**

- brilliant colours and high contrast on diverse substrates
- minimal heat transfer to the print substrate, ideal for synthetic and heat-sensitive substrates
- immediate processing, reduction of delivery times
- industry-leading modularity and expandability



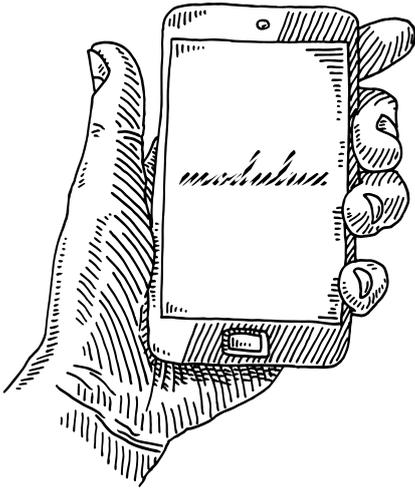
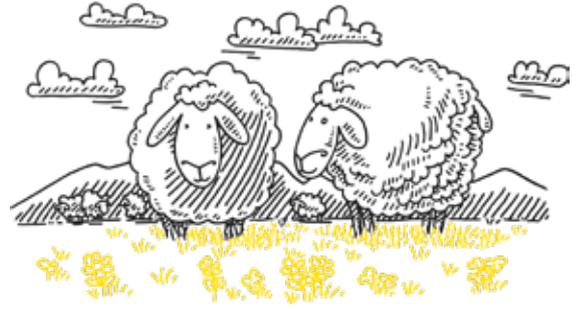
## **... also offers many benefits to newcomers:**

- instant drying of inks and coatings
- no colour change
- brilliant print results, perfect gloss with inline coating
- higher mechanical resistance compared to oil-based colours
- solvent-free ink and coating systems
- easier and faster production on plastics, metallised and uncoated materials
- space and time saving: short processing times since no storage space required for drying time before further processing



## ... protects the environment and conserves resources:

- no powder, ozone or mercury
- no extraction required
- LEDs can be switched on/off immediately, no energy use on stand-by
- minimum thermal impact on the substrate and the printing machine
- no additional warming of the printing room
- format switching and sheet clocking



## WOULD YOU LIKE TO RETROFIT YOUR EXISTING PRESS WITH THE INNOVATIVE LED TECHNOLOGY OF MODULUX? +

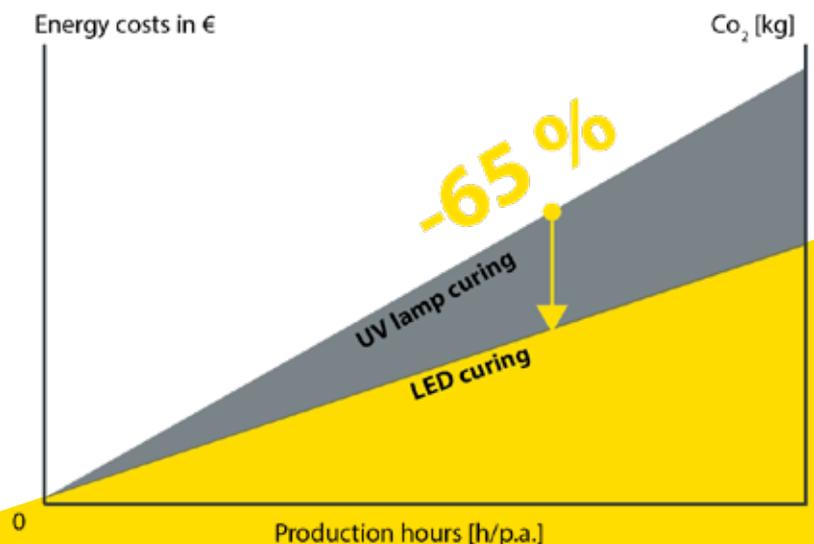
### YOUR BENEFITS +

#### Why convert to LED UV?

+ Save energy (up to 75% saving possible)	+ Fast return on invest (2-3 years possible)
+ No Mercury No Ozone	+ Extreme compact design
+ Instant On / OFF Format Switching	+ modulux Care (2 years warranty*)

>> energy efficient curing. 

By converting your machine to LED-UV you reduce your CO2 footprint, reduce your energy costs by up to 75 % (compared to a UV medium pressure lamp) and speed up your process at the same time.



# HIGHLIGHTS +

## Light sources with fine optical design

modulux turbo's LED light sources are formed by COB (Chips on Board) modules and lenses.

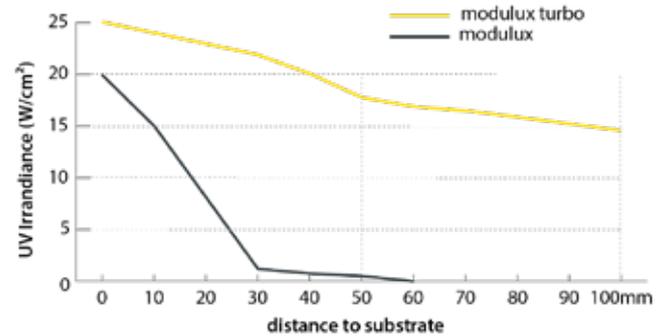
The module design is based on a total concept vision optimizing the optical target, thermal management and module life time. Each and every LED module is 100% inspected by modulux quality control prior to assembly.

Optical design is eminent in establishing performance of a light source. A good light source contains optical parts which are designed and optimized for different (printing) applications as well as for relevant irradiance requirements.

turbo series products apply design of collimated light:

- no fixed focus, high flexibility for different applications
- 30-50% higher irradiance at same power consumption
- turbo keeps almost same high irradiance from distance 40-120 mm

Light sources with a customized lens provide better balance of dose and UV irradiance intensity, which means better curing quality.



# ADVANCED SYSTEM FRAMEWORK +

## Full modular framework

Modulux's LED curing systems are entirely modular in design. All essential components, such as the power supply unit (PSU), controllers and light sources (LED heads) are standardized and function as independent units. This design ensures complete interchangeability of components. Customers experience significant benefits, as replacing components is easy and cost-effective throughout the system's lifetime.

### Control module as the core unit based on MCUs and sensors

Each lamp incorporates a 32-bit MCS (Microcontroller System) as the core, supplemented by the configuration of 1-2 MCUs (Microcontroller Units) for power control, communication and

sensor management within the controller module. The real-time operating parameters of each light source can be swiftly and accurately detected and adjusted.

The distributed storage of control parameters allows for scalable and programmable performance and functions of the light source. Each light source is equipped with a variety of sensors, including temperature, voltage, current and others to ensure the normal working state of the system.

### Simple integration with the press

Only speed on/off signals are required for the LED curing system to operate automatically. Additionally, more interfaces are available for higher levels of integration.



## Lightsource segmentation control

The light source is divided into different sections and the user can configure the operation of each section based on the width of the printed material. This capability allows for energy savings and helps reduce the adverse effects of UV light and heat on the press.

# APPLICATIONS +

## Turbo series product is widely used for the applications:

- Sheet-fed offset printing for commercial and packaging
- Tinline printing, varnish finish coating
- High-speed commercial rotary machine
- Color steel plate coating curing
- Rotary screen printing curing
- Floor, tile screen or printing curing
- PCB solder resistance, three anti-paint curing
- LCD screen a variety of process applications
- General building materials, composite boards and other coatings curing
- Film bonding and functional coating curing

## Services by IST:

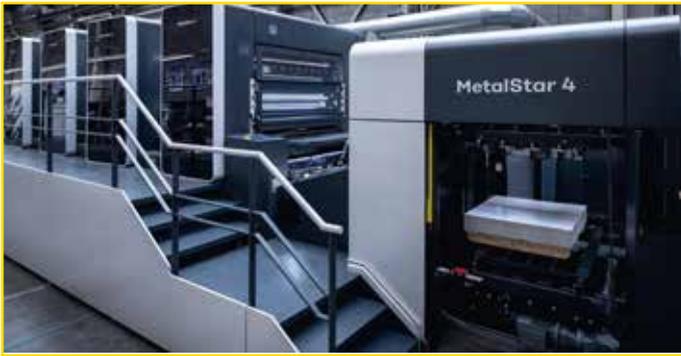
- professional installation
- regular inspections
- integration engineering
- Raytracing

## TECHs



Linear power	110-125W/cm
Max. power lamp	12,5 kW
Irridance @45mm	15-16 W/cm <sup>2</sup>
Irridance @100mm	14-15W/cm <sup>2</sup>
Optical design	collimated
LED recession @10000 hrs	<5%
avg. module failure	<0,3%/5000 h
avg. systeme failure	<1,5 times/5000h
Format switching	in 51 mm steps

### Metal decoration and tinline



### Narrow web



### Web



### Sheet-fed



# UV ANALYZER +

## The "must-have" to quality assurance

The UV Analyzer is an innovative, app-based UV radiation measuring device. It consists of the UV Analyzer App for Android and iOS, the UV Analyzer measuring strips and the UV Analyzer Stick. The app can be downloaded for free from the Apple® App Store® or Google Play. With over 45 years of experience in UV technology, IST METZ exclusively distributes the UV Analyzer measuring strips and stick.



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