UV ANALYZER Workshop

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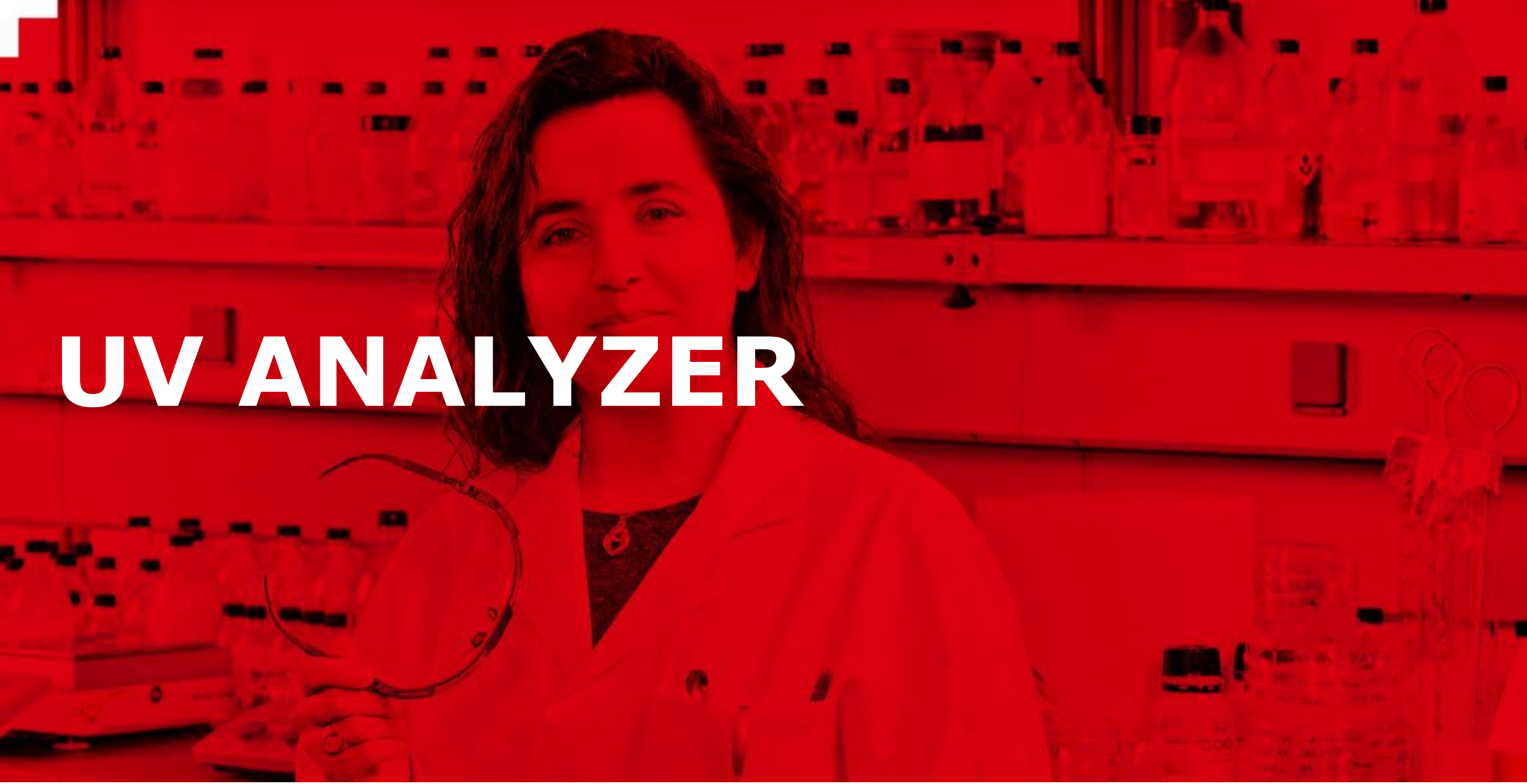
EXPERTLY DONE.



UV ANALYZER

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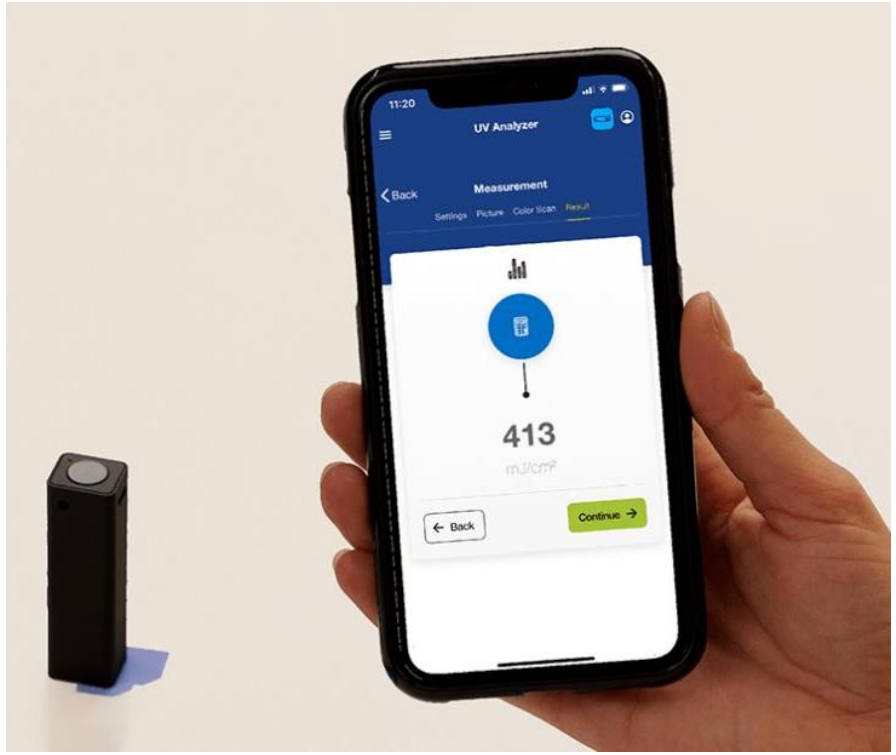
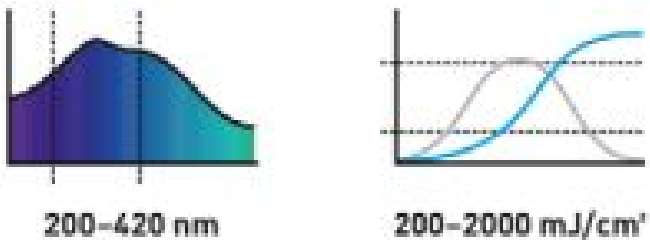


+ **APP-BASED UV MEASUREMENT DEVICE**
  + FOR ANDROID AND IOS, from App Store® from Apple® or via Google Play free of charge
  + UV ANALYZER SELF-ADHESIVE STRIPS
  + UV ANALYZER STICK

UV ANALYZER

+ **TECHNICAL DATA**
  + Dimensions H x W x D: 6 cm x 1,8 cm x 1,6 cm
  + Weight: 16 g
  + Rechargeable battery with USB
  + Connectivity: Low Energy Bluetooth

UV Analyzer

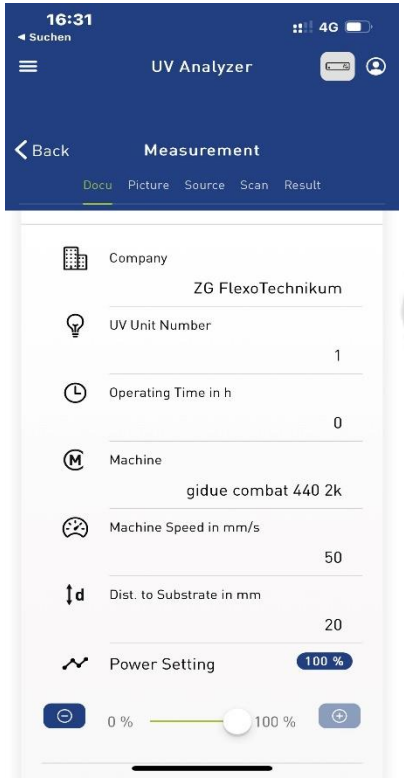


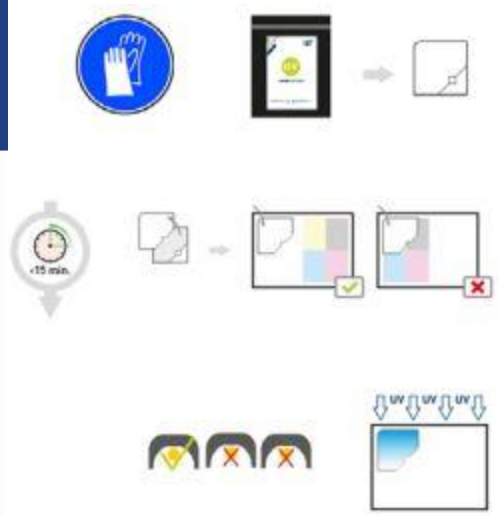
+ **FEATURES**
  + Recommend UV dose
    + 200 mJ/cm² up to 2000 mJ/cm²
    + Varies depending on aggregate and spectrum
  + UV Analyzer for **UV and LED** units

UV Analyzer

+ **TECHNICAL SPECIFICATION Strips**
  + Store between 0 and < 18 degrees
  + No direct sunlight, protect from liquids and contact materials, store the strips in supplied packaging
  + Observe shelf life

UV ANALYZER

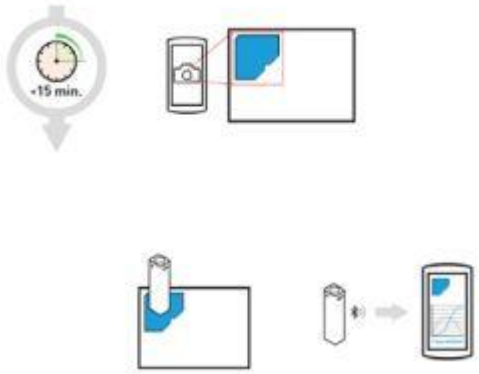




+ PERFORMANCE OF THE MEASUREMENT

+ Use gloves (Finger touch!) to remove the measuring strips from the light protected packaging.
+ Separate one measuring strips.
+ Remove measuring strip and stick on a white (light) substrate.
+ Irradiate the measuring strip with UV light depending on the irradiation dose, the measuring strip turns dark blue.
+ Each UV lamp should always be measured individually.
+ After 15 minutes use the app, select a suitable UV reference depending on the unit and enter the measurement data.

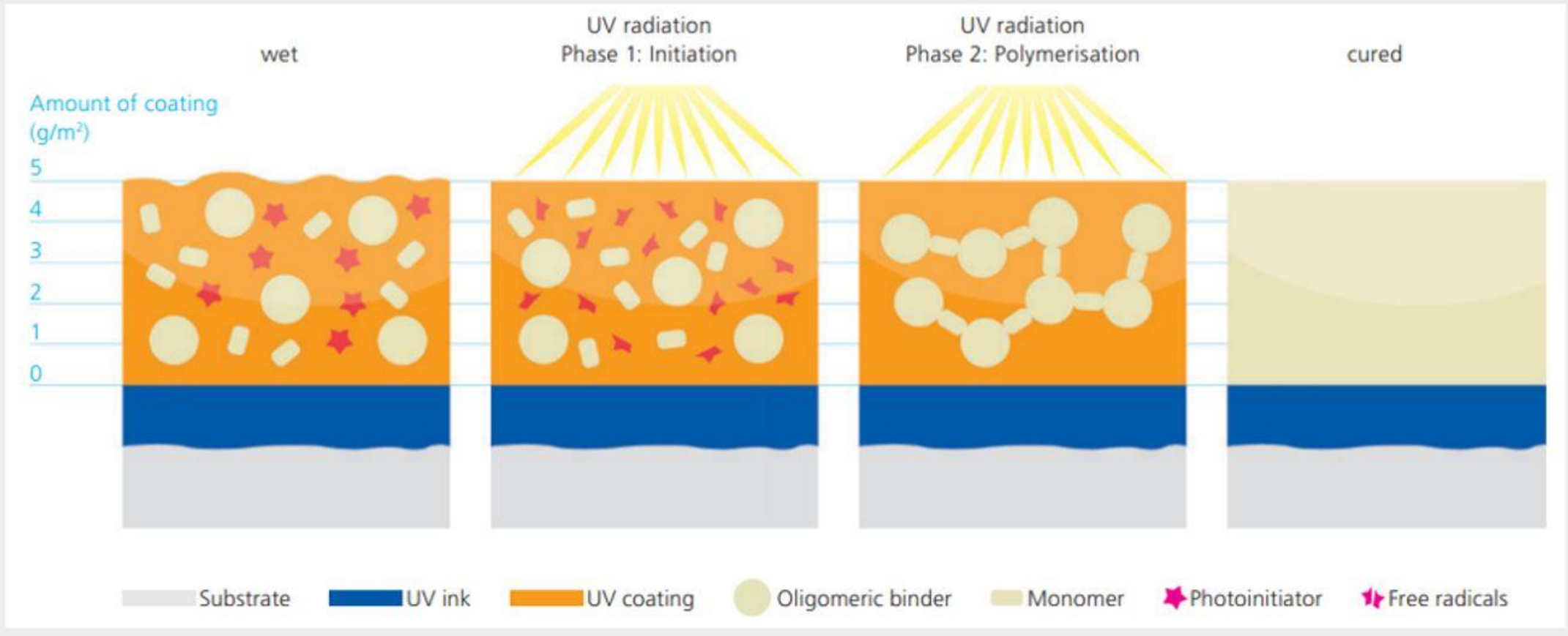
UV Analyzer



+ **PERFORMANCE OF THE MEASUREMENT**

+ The app recognizes the measuring strip and saves the photo for documentation purposes.
+ Place the UV stick on the exposed strip and take the measurement.
+ The obtained value is transferred to the app via Bluetooth and saved in a log
+ The protocol is automatically created and can be shared. Maximum of 25 measurements can be saved.

Function of UV / LED curing

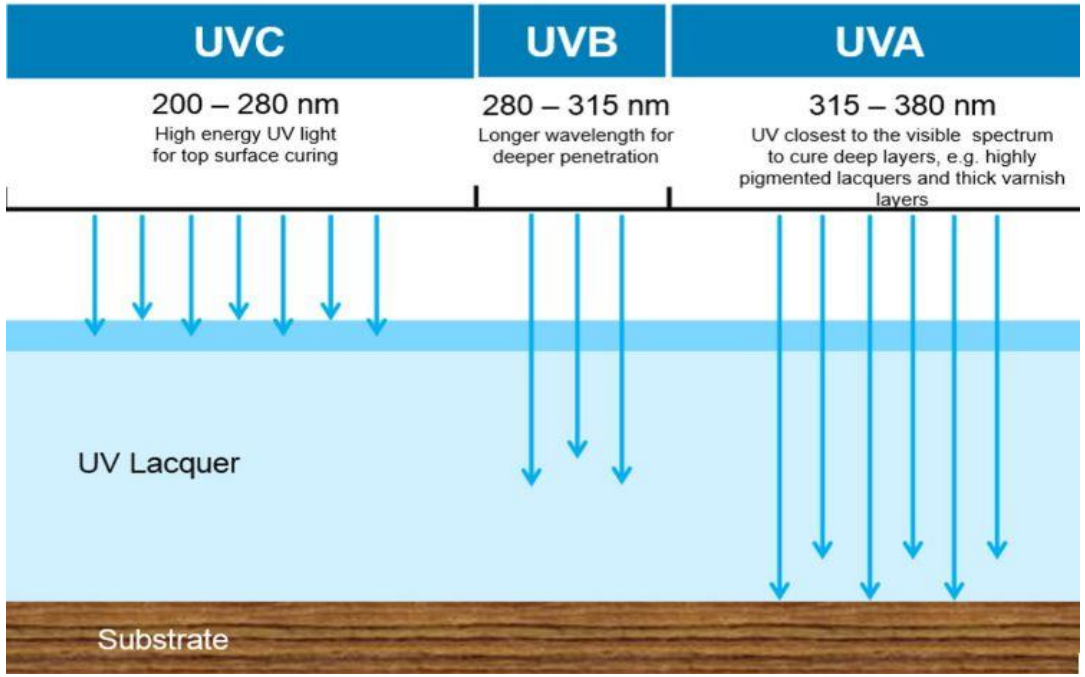


What does the light-sensitive label measure?

The energy (joules) is a value for the total number of photons that hit a certain surface of the substrate under the UV/LED lamp. This value you can measure with this equipment in mJ/cm²

Influencing factors:

- Conditions of the lamps
- Energy level of the lamps
- Dwell time under the lamp



Real practical trial under conditions of the customer

Press	MPS 530 / Eight Units
LED	GEW Leo LED 25 watt watercooled 25°C
Temperature coolling roller	27°C
Anilox roller	Apex GTT L
Tested printing speeds	50 / 100 / 140 m/min.
LED power at all speeds	100%
Corona treatment	Yes, 2000 watt
Substrat	Herma PP TC

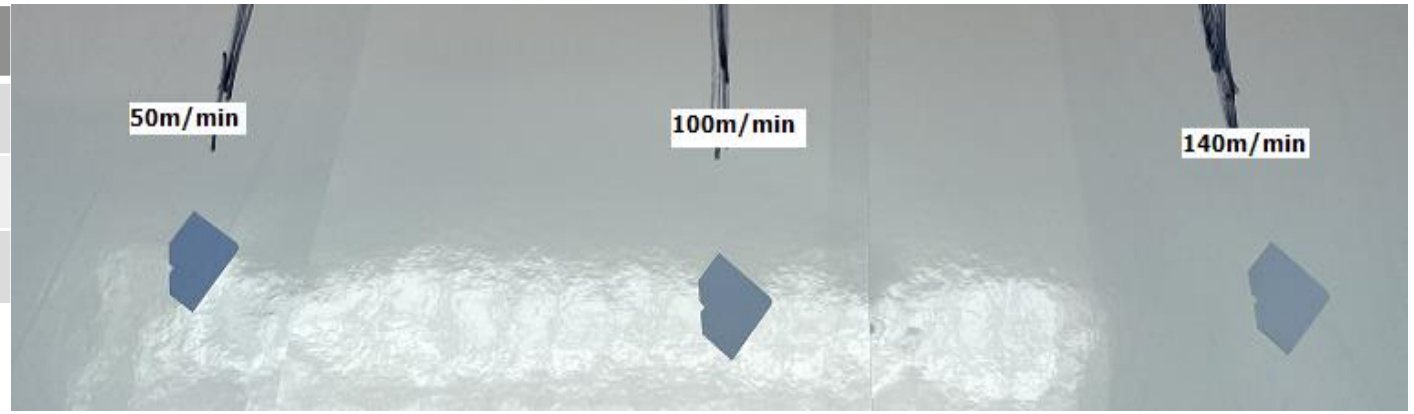
Measuring the lamp energy before the trial

Check the LED lamp in last unit / Unit 8

LED output power at different speeds

Setting in the UV Analyzer “LED 395nm”

Production speed	LED output 100%
50 m/min.	431 mJ/cm²
100 m/min.	238 mJ/cm²
140 m/min.	184 mJ/cm²



Result:

At a speed from 140m/min was the energy impact high enough to cure the LED inks

Possible curing problems beside the lamps

- Wrong size of the anilox roller
- Too high ink laydown
- Some inks are “special” for example black, opaque white, metallic, dark shades
- Image isn’t made for higher production speed
- Substrate (paper) is too open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