

ICAD® Test Bench Models & Ink Testers

The must-have tool for any narrow web printer or ink supplier

Imaging testing your ink/coating with the actual speed of the customers line and with the same UV lamp as the customer uses. Or imagine having a fast way to test your lamps on a printing press, taking away uncertainty of the UV lamp performance. Process documentation for application like food packaging or other value printing applications is now correct and much easier.



ICAD® Test Bench is developed for testing of both UV lamps and ink/coating formulations with real press parameters. ICAD® Test Bench will allow you to:

- Quickly scan any UV or UV LED lamp to get the irradiated profile of the lamp – and thereby.
- Measure any point on the lamp with a radiometer e.g. PowerMap® II or LEDMAP from EIT 2.0.
- Test ink, coatings and colors at full line speed and with equal lamp which is on the press.

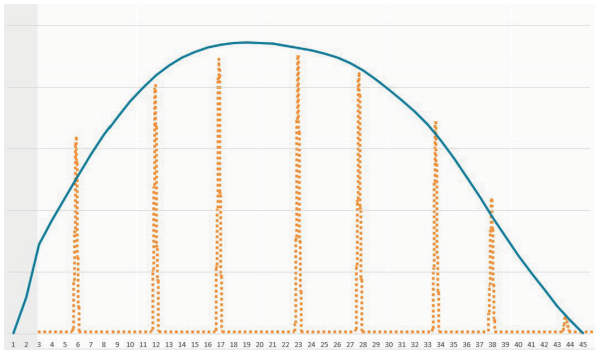
Advantages:

- Have an efficient printing press running with correct lamp settings – enabling correct cure of products.
- Make formulators define the cure parameters in real time with actual lamp – and make printers evaluate if they have the right parameters in their printing press.
- Understand when to change bulbs and when to do other service like reflector change, quartz cleaning or electrical upgrades.
- Identify lamp settings to minimize energy consumption.

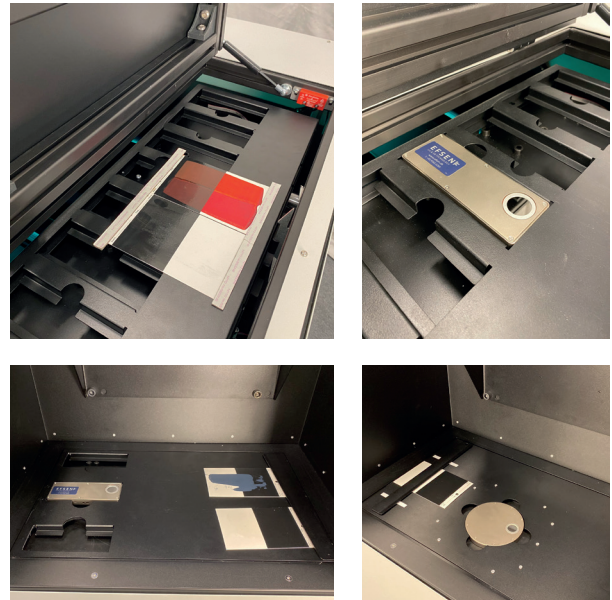
ICAD[®] compared to PowerMap[®] II UVA

You can pass a radiometer like PowerPuck II or PowerMap under the UV or UV-LED lamp at a given program to evaluate the output of the lamp with ICAD[®] values vs. radiometer values. This enables you to define the required irradiance (mW/cm²) and dose (mJ/cm²) for each ink/coating and thereby transfer this demand to your customers.

End user can use the ICAD[®] scan to get a fast check of the lamp performance meeting the required specs.

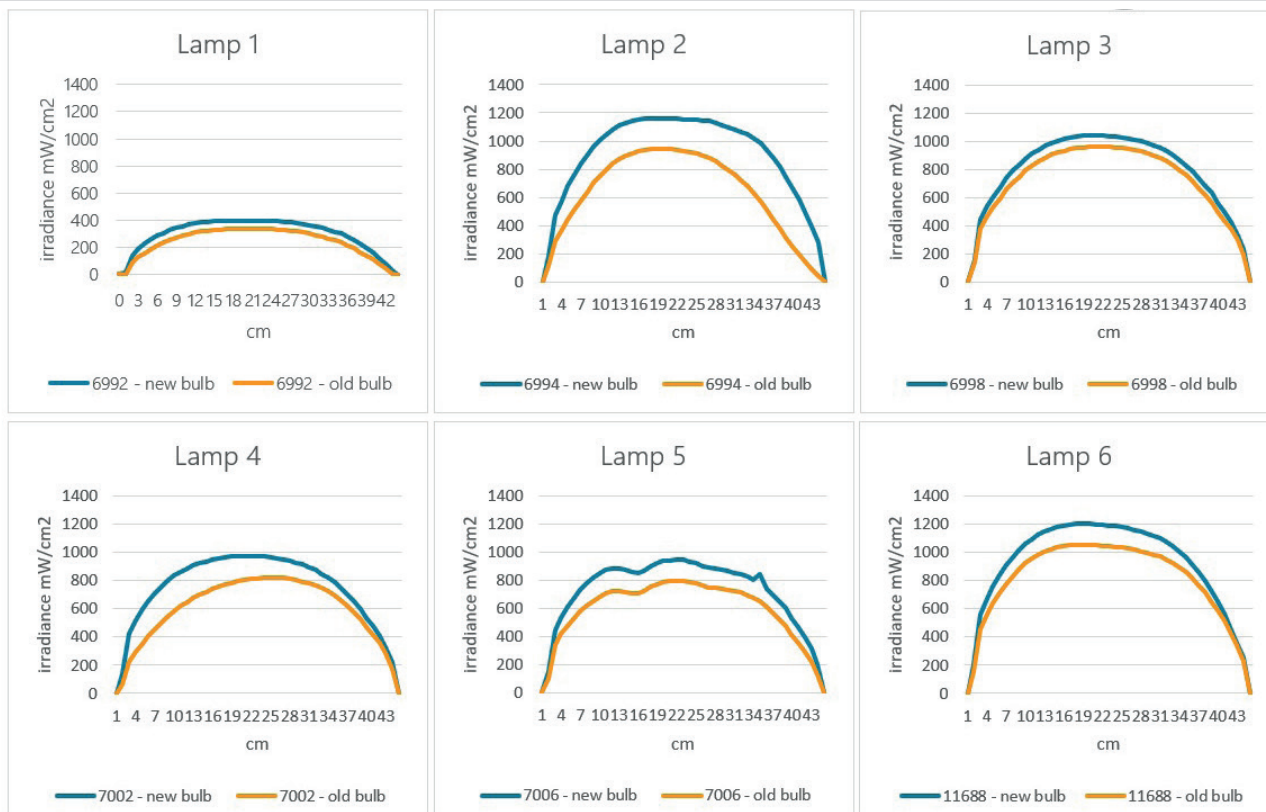


ICAD[®] scan and 8 PowerMap[®] II measurements of the same lamp, demonstrating the comparability of the two.



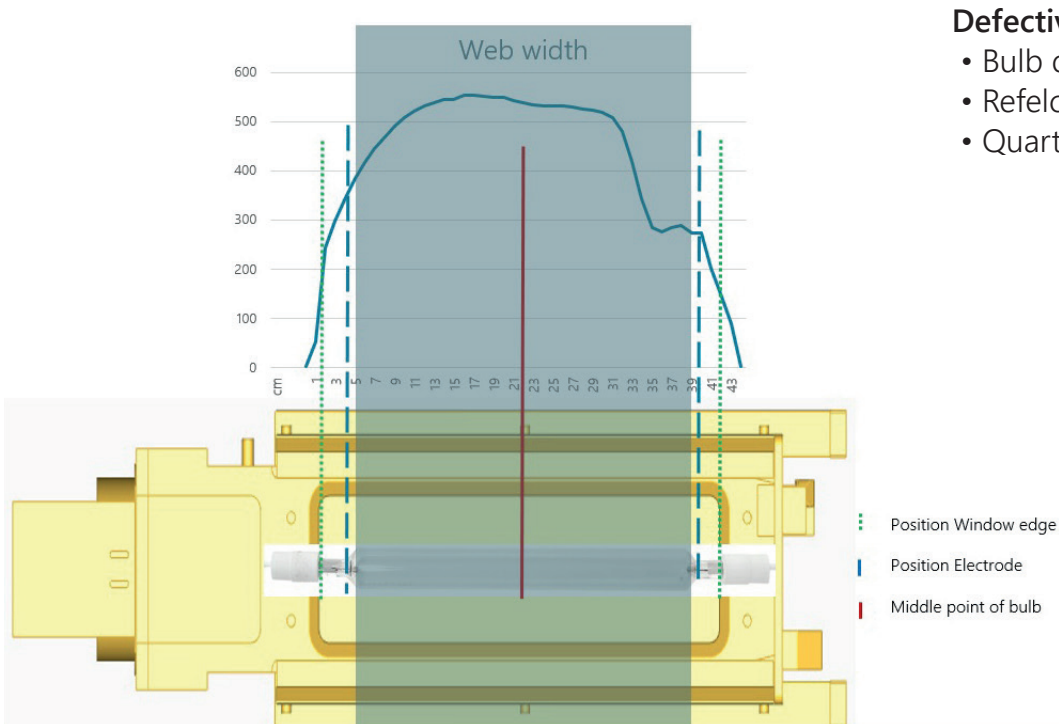
Measuring 6 lamps on a narrow web printing press

Below you can see 6 lamps from a printing press tested before and after change of bulb. Lamp 1 has a defect reflector, which needs to be changed as well as lamp 5.



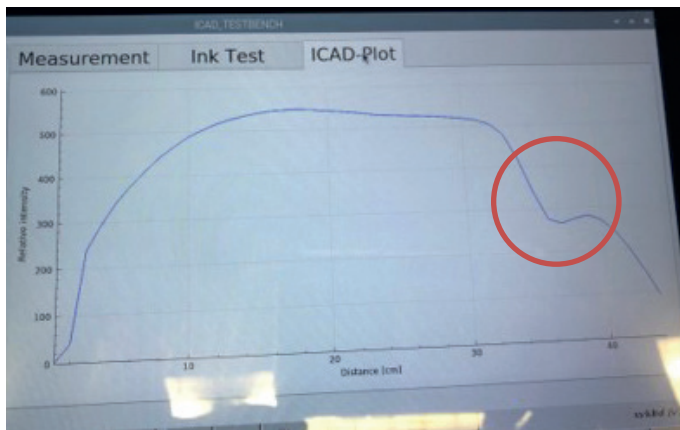
ICAD[®] compared to PowerMap2 UVA

One challenge for UV processes is shadowing items. An ink-stain on the quartz window will reduce the dose applied and influence the quality of the product made. ICAD[®] can be used to trouble shoot this and inform when lamps are degraded or if there are objects, ink-stains etc. that hinders a good cure.

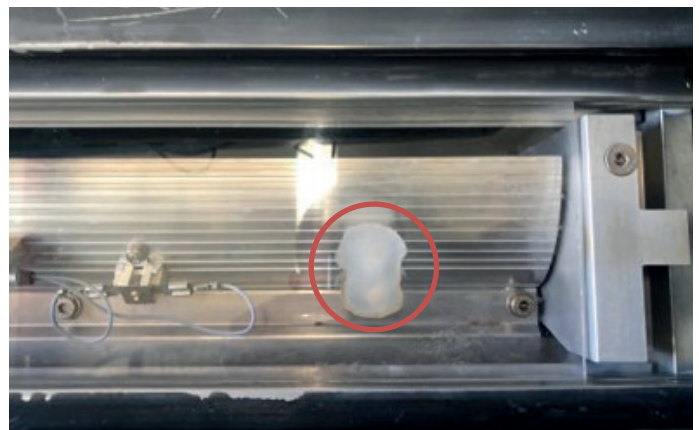


Defective reactions due to:

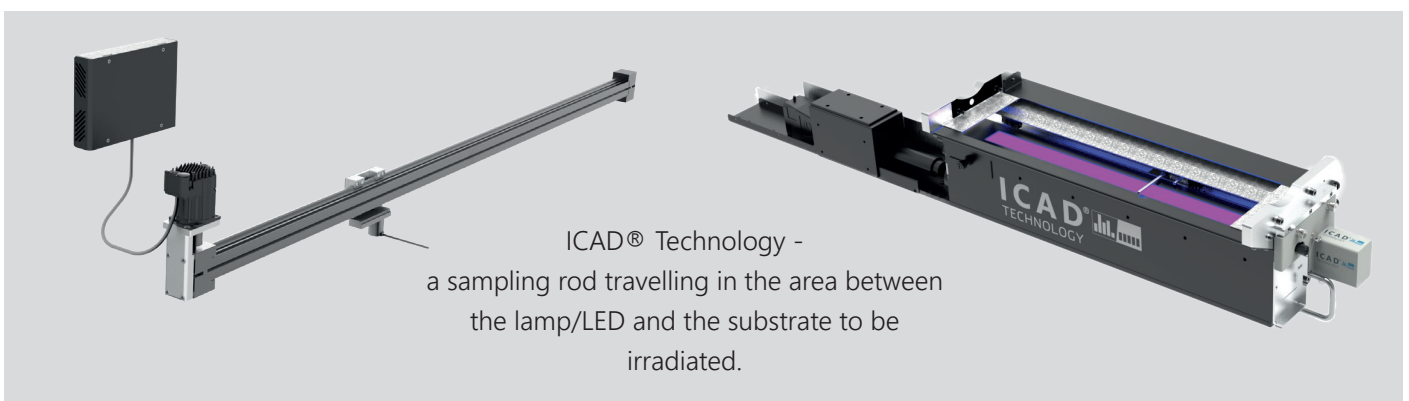
- Bulb degradation
- Refelctor degradation
- Quartz with dirt/stain



Dose decrease detected by ICAD[®]



Ink spot on quartz or LED lens.



ICAD[®] Technology -
a sampling rod travelling in the area between
the lamp/LED and the substrate to be
irradiated.

Test Bench models

The Test Bench concept is easily adopted to the needs of the customer. Below is examples of complexity and types.

XYZ-model

XYZ-model measures lamp output in three dimensions, so you can find the value at any point in front of the UV or UV LED source. This is ideal for lamp manufactures, large ink formulators and printers with many lamps, who requires deep knowledge of the process.

XYZ-model



Y-model

Y-model is a ideal for fastscanning of lamps as well as ink-testing and development. The tray travels in one direction (Y) and ICAD® scans along the lamp source (X).

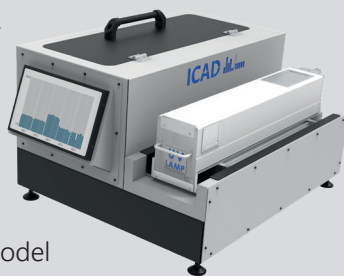
Y-model



Test Box-model

The Test Box is a small and effective lamp controlling unit for printers, who require control of their UV lamps. Insert lamp, and in 2-4 minuttet ICAD® Test Box has evaluated output and generated a report for documentation.

Test box-model



Multi lamp-model

The Test Bench concept can be made for more lamp sources. Some ink suppliers require both UV and UV LED for their Test Bench, and then each source has its own ICAD® scan. Some printers have different lamp sources, and they can either have one Multi-Lamp Test Bench covering the whole range, or multi Test Boxes (one for each lamp system).

Multi lamp-model



ICAD® TECHNOLOGY A/S has a vision of delivering safer and higher quality end-user products, by helping to set the agenda for future technology standard within the radiation technology UV. Our unique ICAD® technology allows for continuous monitoring of UV output during production.

ICAD® Technology is patent technology by ICAD TECHNOLOGY A/S
US patent no. 11,097,309 - Korean patent application no. 10-2019-7035307 ("Patent pending")
European patent no. EP 3615141

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