

n.jet display

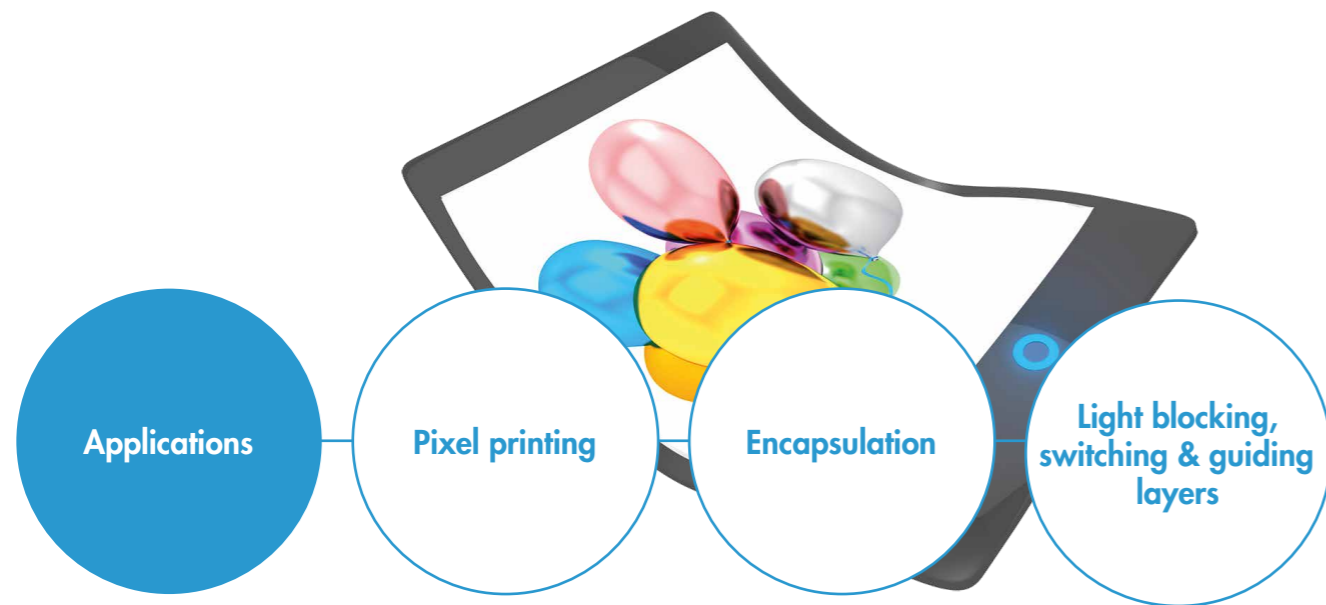
NOTION
SYSTEMS



WE PRINT MURA FREE DISPLAYS WITH INKJET

DISPLAY

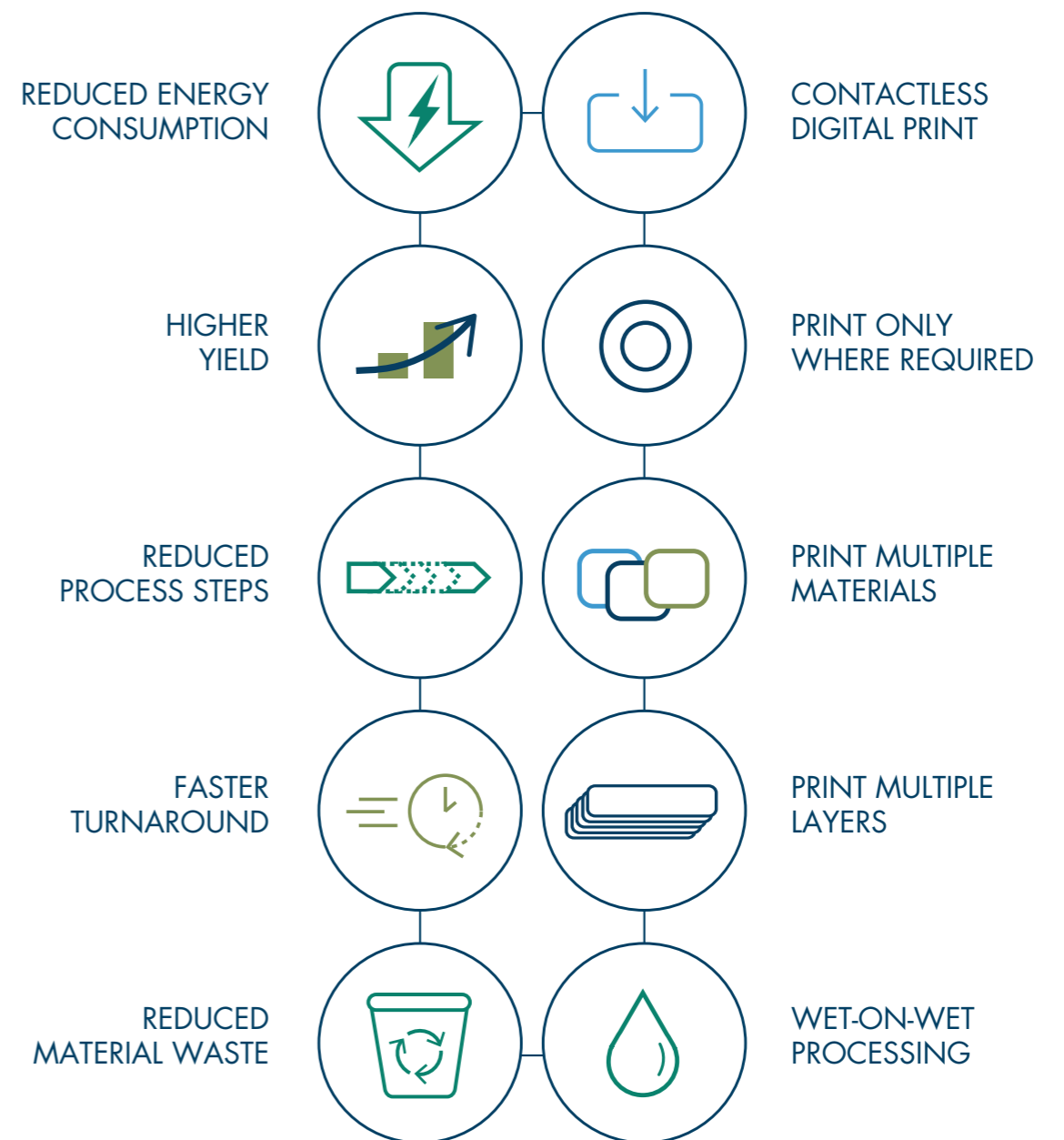
The n.jet display series prints functional layers in various steps of display production, and for various display technologies. This includes rigid, flexible, OLED, QLED, and LCD displays. In addition to its unparalleled precision, the platform complies with highest demands on process environment and process stability. Specifically developed features, like the no.mura printing technology solve long-standing challenges of the industry and enable an efficient, additive use of the valuable materials involved in manufacturing of next generation displays.



ADVANTAGES OF INKJET PRINTING

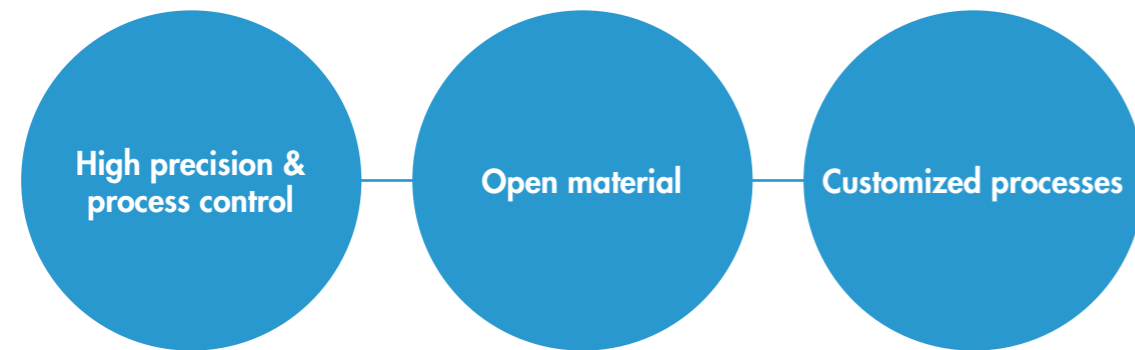
Inkjet is a non-contact, digital printing technology which creates fine structures of 30 microns and below. The fully digital non-contact printing enables wet-on-wet processing without the need for masks or screens.

Inkjet is used to replace established subtractive process sequences and reduces waste and energy consumption, which makes electronics production more economical and ecological.



MAIN FEATURES

- Optimized maintenance concept for production platforms and minimized waste of materials
- Non-contact nozzle cleaning for highest process stability and long printhead lifetime
- Mura-free printing and nozzle & jetting calibration



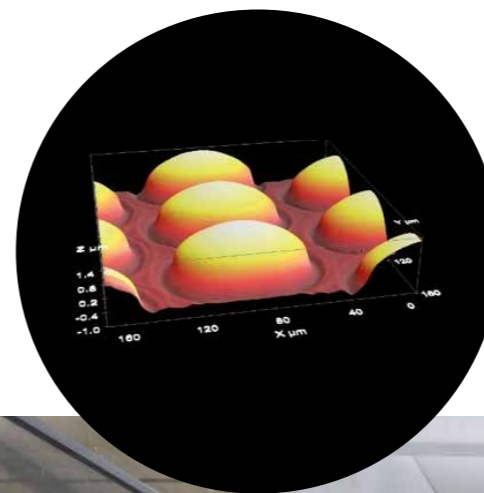
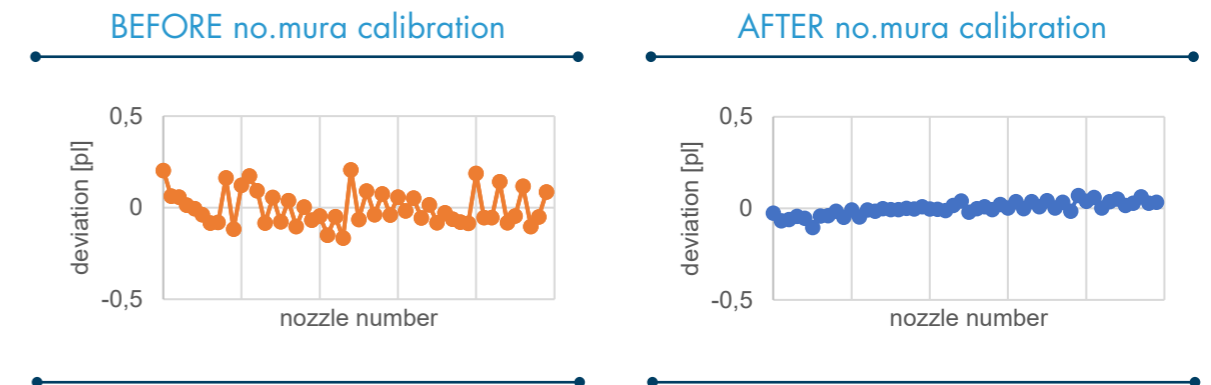
- Drop formation analysis for picoliter droplets
- High precision print position calibration

- Open material inkjet printer
- Full access to all process parameters
- Waveform editor with access to all drop formation parameters
- n.jet platform adapted to your production process (if supported by print-head model)

- Customized print head configuration and layout
- Supports all major print heads for display industry
- Fine tuned inkjet process
- Advanced printing strategies for display and electronics industry
- Precise drop volume control
- Your process scale-up supported by our inkjet experts

MURA FREE PRINTING OF RGB LAYERS

- Pixel to pixel volume variations need to be below $\pm 1\%$ to avoid visible defects in the end product
- Drop volume variations of industrial print heads are typically in the area of $\pm 10\%$



pixel volume accuracy $\pm 1\%$



DIMENSIONS & SPECIFICATIONS

Processes:	RGB printing (OLED, QLED, μ LED) color filter (rigid & flexible substrates) LCD ink application special & bespoke processes
Substrate size:	Up to gen 4.5
Alignment:	Better than 1 μ m
Drop placement:	better than 5 μ m
Environment control:	HEPA / Laminar flow / controlled T & RH / inert glove box
Rotary stage:	optional
Drop watcher:	optional
Load/unload:	manual / automatic
Stage heating:	optional
Calibration:	automatic

COOPERATION WITH BRAUN

Clean. Engineering. Expertise.

Notion Systems and M.Braun Intergas-Systeme offers a fully integrated solution that combines compact design with minimized nitrogen consumption.

Inert atmosphere is important, but a clean atmosphere too. MBRAUN systems can remove solvent vapors, dust and hazardous particles. The gas purification systems can be equipped with (regenerable) solvent filters to remove very quickly the solvent vapors produced during the printing process. To effectively remove evenly distributed particles, the unidirectional flow (laminar flow) is MBRAUN's preferred approach and allow us to achieve an ISO Class 2 cleanroom standard.

In addition to the inert atmosphere, MBRAUN provides system solutions which effectively pretreat the substrates and cure the printed layers. State of the art VCD tools allowing precise control of temperature and pressure. A range of thermal treatment solutions such as hotplates, convection ovens and vacuum ovens in batch and single substrate setup as well as UV-cleaning and UV-Curing equipment complete the fully process of pretreatment – printing – curing.



NOTION

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