The new Prexision™ series
Setting the global standards for displays

MYCRONIC

When passion meets innovation

Prexision Evo series
Remarkable precision for all the world's displays

The new generation Prexision series are built on the Evo control platform. Updated with new, innovative software and hardware architecture, it's been designed for the future of production automation, advanced connectivity and big data applications.

IMPROVED STABILITY AND HIGHER UPTIME
New servo board with linear movement, simplified electronics with better performance and modern bus structure provide superior stability and better error handling to create higher system uptime.

**SUPPORT FOR HIGHER LEVEL OF FACTORY AUTOMATION WITH VARIOUS LOADER SOLUTION**
Newly developed PLS (Pre Loading System) and interface supporting communication from factory automation system to minimize human interface in order to reduce contamination and human error.

BETTER SUPPORT FOR LOGGING, CONNECTIVITY AND BIG DATA APPLICATIONS
New servo board log all motions in system which can be analyzed and used for many different purpose, enabling stable system operation and extension to big data applications.

EXTENDABLE WITH NEW FUNCTIONALITY
Build on completely new modern hardware and software architecture for possibility to develop new functions in the future meeting customers' demand.
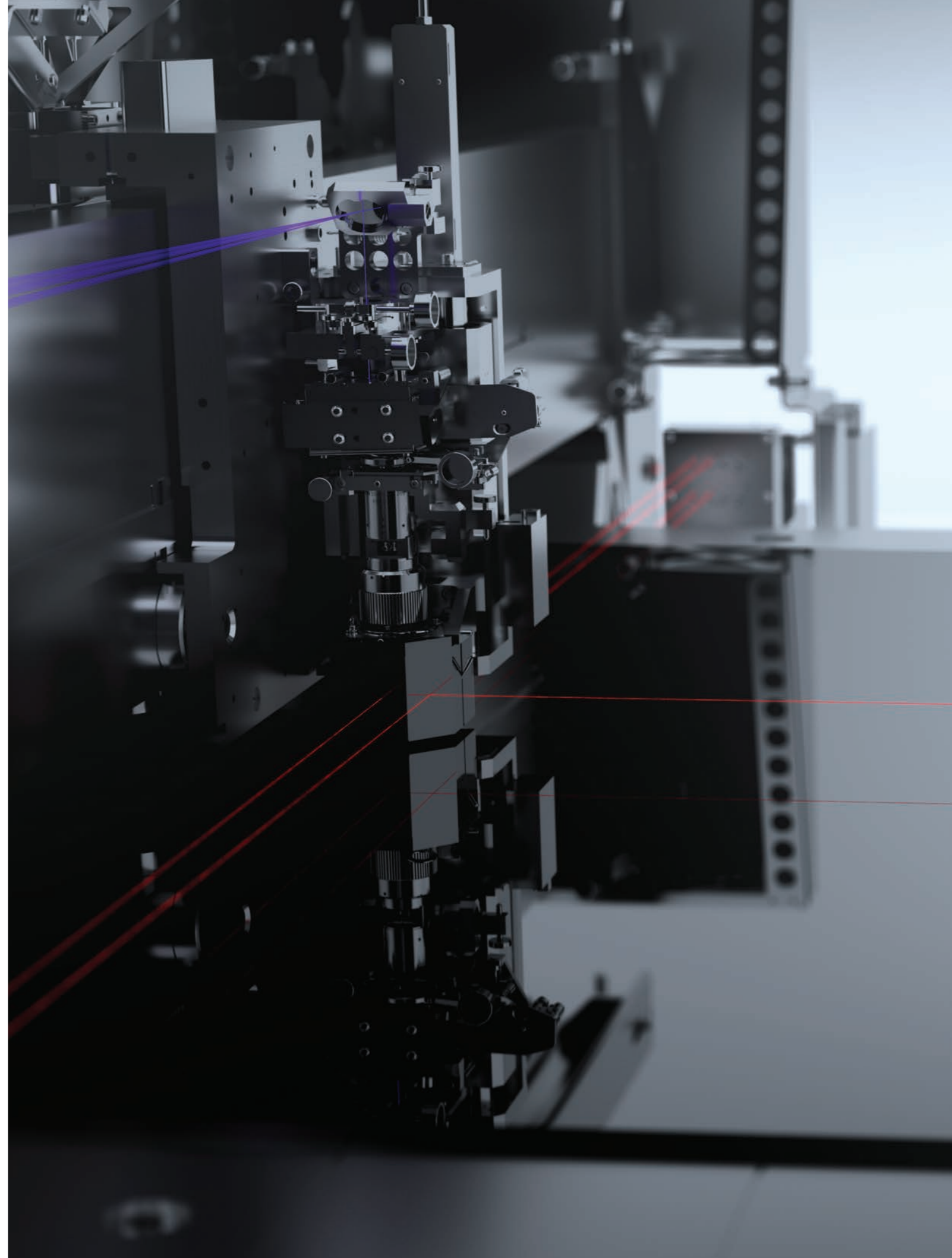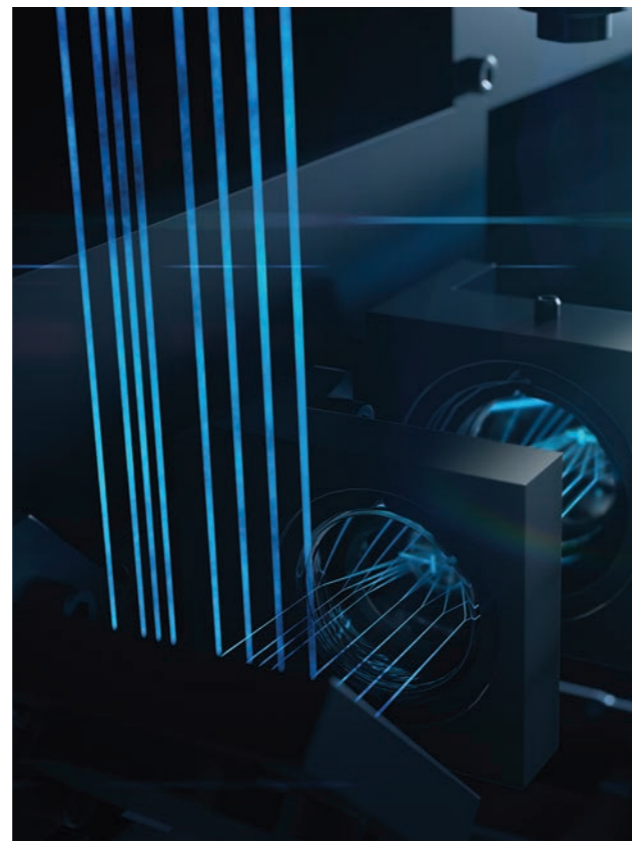
Prexision 800 Evo
The new resolution standard for top critical photomask manufacturing

Prexision 800 Evo is the most advanced mask writer when it comes to efficient production of top critical photomask manufacturing for cutting-edge displays such as AMOLED and foldable displays for flagship smartphones.

Benefits of the Prexision 800 Evo
*   25% increase resolution with custom made final lens
*   3 times better lens and mirror quality with stress free optic mounter
*   More multi beams to maintain throughput even with smaller pixels
*   HT mode specs similar with Prexision 80 Evo HA mode
*   New improved software algorithm to compensate uneven beam performance

2X better CD uniformity performance compared to Prexision 80 Evo. Prexision 800 Evo is perfect for defining small enough feature size with good quality, such as OPC (Optical Correction Proximity) on photomasks that are required for the most advanced display manufacturing, as well as support for future R&D.

Prexision 800 Evo

KEY SPECIFICATIONS	HA mode	HT mode
Minimum lines and spaces (pitch/2)	0.55 µm	0.85 µm
Constituent CD uniformity (3σ)	10 nm	15 nm
CD linearity 1.0-10 um (p-p)	50 nm	85 nm
Local placement (3σ)	30 nm	50 nm
Written registration (3σ)	125 nm	175 nm
Written overlay (3σ)	40 nm	50 nm
Mask set overlay (3σ)	75 nm	100 nm

Prexision 80 Evo
Higher yield for high resolution advanced LCD and AMOLED displays

Prexision 80 is known for overcoming the challenge of the "invisible Mura" for advanced AMOLED displays for smartphones. With the Evo control platform, the Prexision 80 Evo is more robust and stable than ever which is perfect for critical photo-masks manufacturing used for high resolution LCDs and mid to advanced AMOLED displays.

Key highlights
*   Software algorithm to compensate uneven beam performance
*   2X better CD Uniformity performance compared to Prexision 8 Evo/Prexision 10
*   Z-correction as a standard function

Prexision 80 Evo

KEY SPECIFICATIONS	HA mode	HT mode
Minimum lines and spaces (pitch/2)	0.75 µm	1.0 µm
Constituent CD uniformity (3σ)	15 nm	25 nm
CD linearity 1.5-10 um (p-p)	50 nm	85 nm
Local placement (3σ)	30 nm	50 nm
Written registration (3σ)	150 nm	200 nm
Written overlay (3σ)	50 nm	70 nm
Mask set overlay (3σ)	75 nm	100 nm
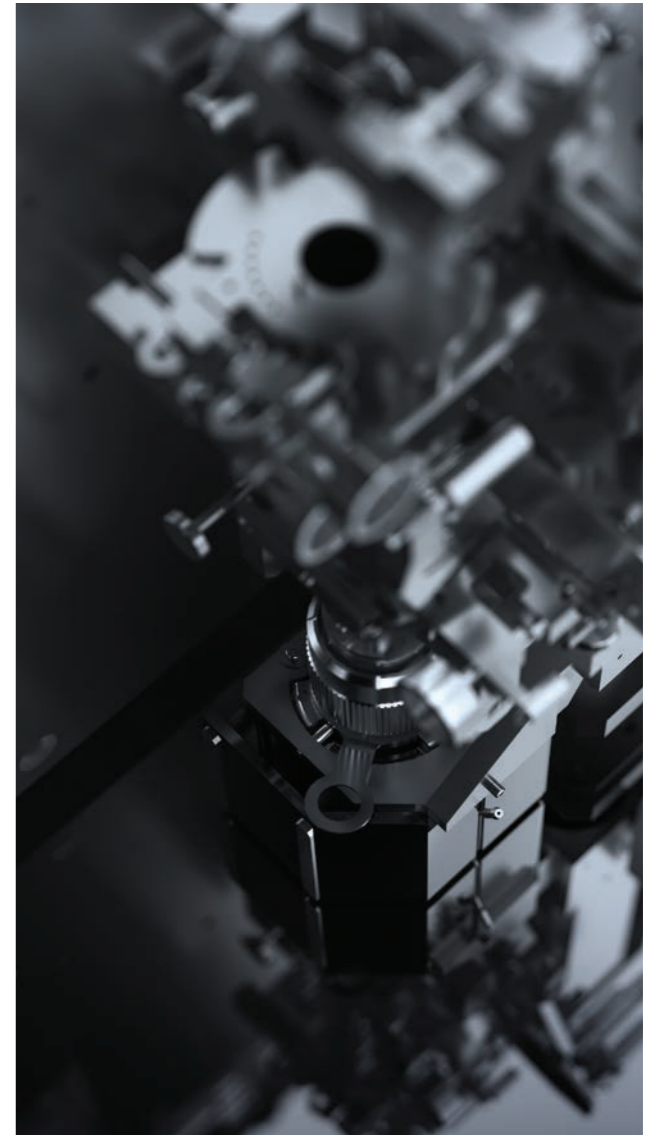
Prexision 8 Evo and Prexision 10
The best fit for volume production of photomasks for advanced LCDs

Prexision 8 has been the display industry standard for a decade, and is now being upgraded to the Prexision 8 Evo. Prexision 8 Evo can handle up to generation 8 mask size and comes with new mode configuration, offering a wide range of choices depending on the user's business strategy. Prexision 10 system can handle up to generation 11 mask size.

Key highlights
- The most well balanced system between performance and volume production of advanced TFT LCD photomask.
- New calibration procedure used for advanced mask writer to maintain system performance for Prexision 8 Evo
- New "Entry mode" for Prexision 8 Evo widening system offering

Prexision 8 Evo

*Requires Z-correction option

KEY SPECIFICATIONS	ENTRY MODE	HA mode	HT mode
Minimum lines and spaces (pitch/2)	1.2 µm	0.75 µm	1.0 µm
Constituent CD uniformity (3σ)	30 nm	20 nm	25 nm
CD linearity (p-p)	85 nm (2.4 – 10 um)	50 nm (1.5 – 10 um)	85 nm (1.5 – 10 um)
Registration (3σ)	90 nm	90 nm	90 nm
Written overlay (3σ)	150 (120*) nm	120 (90*) nm	150 (120*) nm
Mask set overlay* (3σ)	120 nm	90 nm	120 nm

Prexision 10

*Requires Z-correction option

KEY SPECIFICATIONS	HA mode	HT mode
Minimum lines and spaces (pitch/2)	0,75 µm	1.0 µm
CD uniformity (3σ)	60 nm	85 nm
CD linearity 1.5-10 um (p-p)	50 nm	85 nm
Registration (3σ)	90 nm	90 nm
Written overlay (3σ)	120 (90*) nm	150 (120*) nm
Mask set overlay* (3σ)	90 nm	120 nm

Prexision Lite 8 Evo
A cost-efficient mask writer for low to mid-end display photomasks

Mycronic LRS systems have supported the market for less complex photomasks for a decade, despite its limitations in terms of stability and data path to handle increase in pattern data size. The Prexision Lite 8 Evo is the new system model that supports low to mid-end display photomasks, developed and based on know-how from old experience and new technologies that's been proven to work from the field systems.

Key highlights
- Fastest mask writers with writing speed 1,350 mm^2/min
- Level 60 final lens
- Granite stage that can handle generation 8 photomask size
- Stable data path to handle increasing data size
- Adoption of improved calibration procedure from advanced mask writers to widen addressable market

Prexision Lite 8 Evo

*Requires Z-correction option

KEY SPECIFICATIONS	HA mode
Minimum lines and spaces (pitch/2)	1.2 µm
Constituent CD uniformity (3σ)	30 nm
CD linearity 2.4-10 um (p-p)	85 nm
Registration (3σ)	120 nm
Written overlay (3σ)	300 (250*) nm
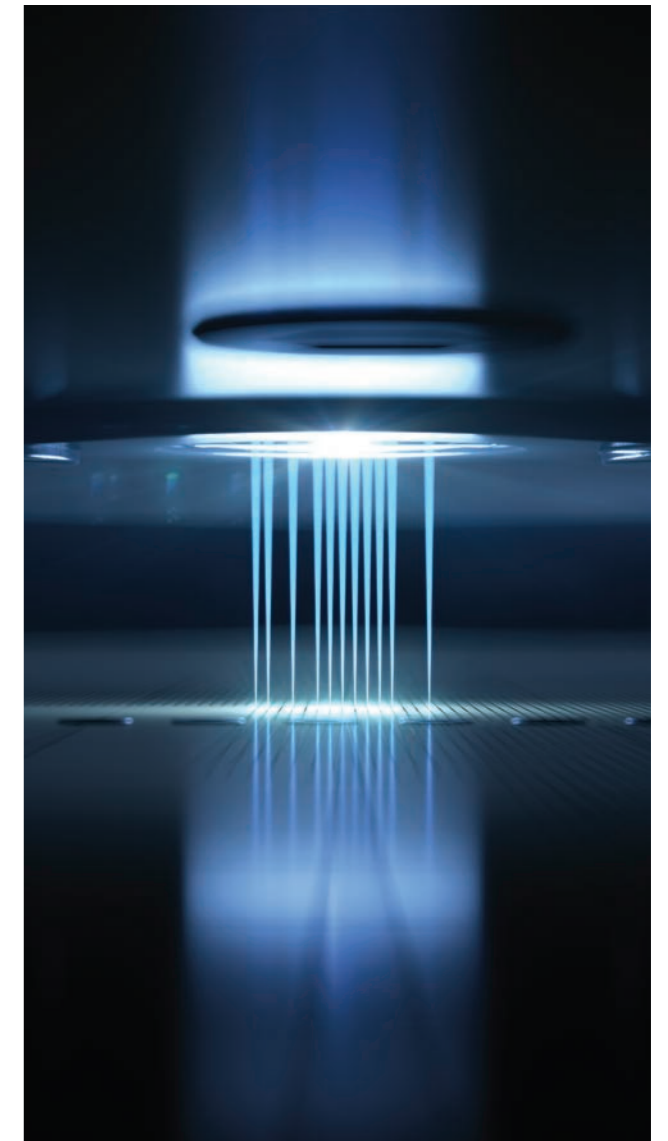
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