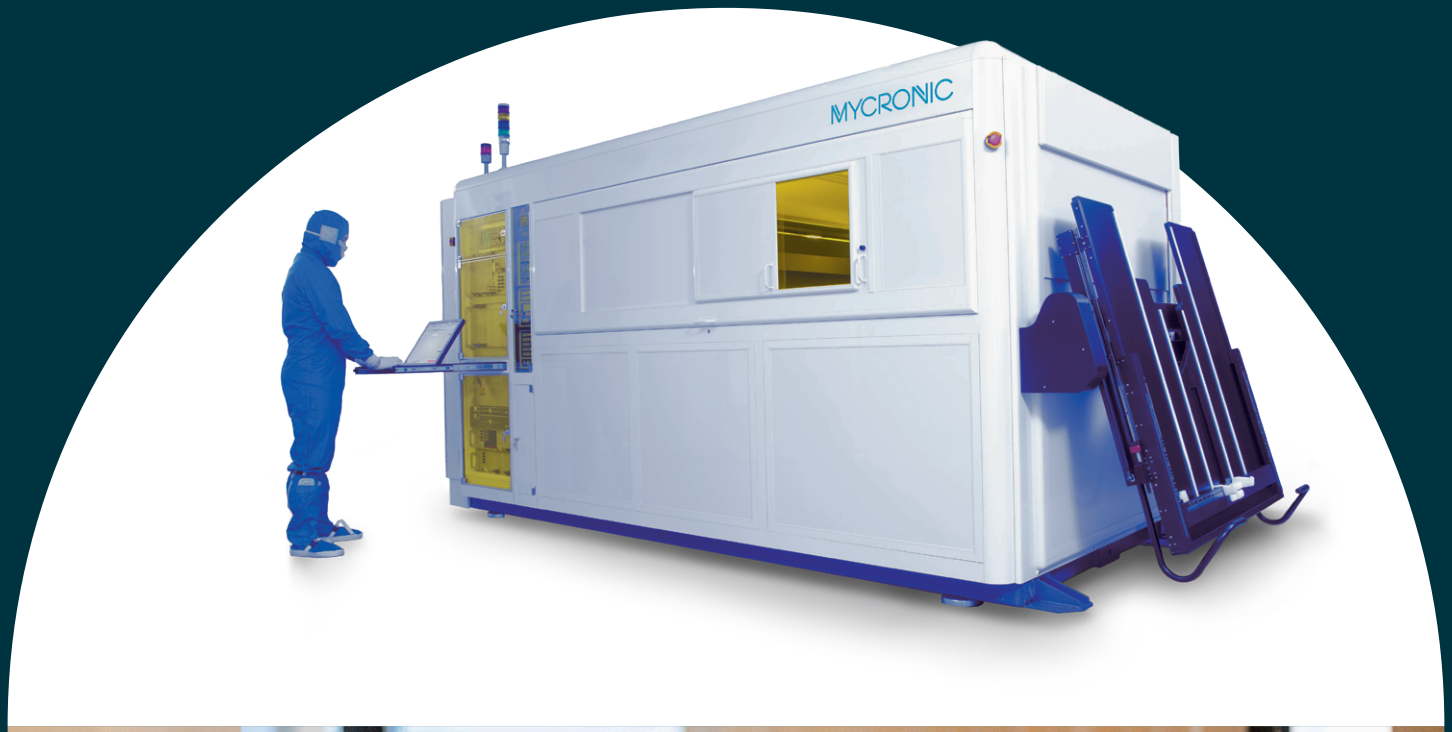
MYCRONIC

Built for world-class **photomasks**

The new FPS™ series





Full flexibility for multi-purpose photomasks

Laser path at optical rails
To ensure pattern quality on the photomask, a great treatment on laser beam is essential. Mycronic FPS series uses the same writing principle as other high-end mask writers from Mycronic and delivers superior image quality performance.

The FPS Evo series **Full flexibility for multi-purpose photomasks**

The new generation FPS series is 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 SOLUTIONS
Newly developed PLS (Pre Loading System) and interface supporting communication from factory automation system minimize human interface, in order to reduce contamination and human error.

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

EXTENDABLE WITH NEW FUNCTIONALITY
Built on completely new modern hardware and software architecture, it enables development of new functions to meet customers' future demand.



FPS 6100 Evo & FPS 6100E Evo

Improved stability, higher speed and lower costs for the advanced multi-purpose market

Advanced photomasks for the multi-purpose market have continuously adapted to the requirements driven by electronics component miniaturization, while at the same time operating in a cost sensitive market space. Reliable and well proven, the FPS 6100 Evo is used by some of the world's leading photomask manufacturers to achieve superior image quality and productivity for advanced multi-purpose applications.

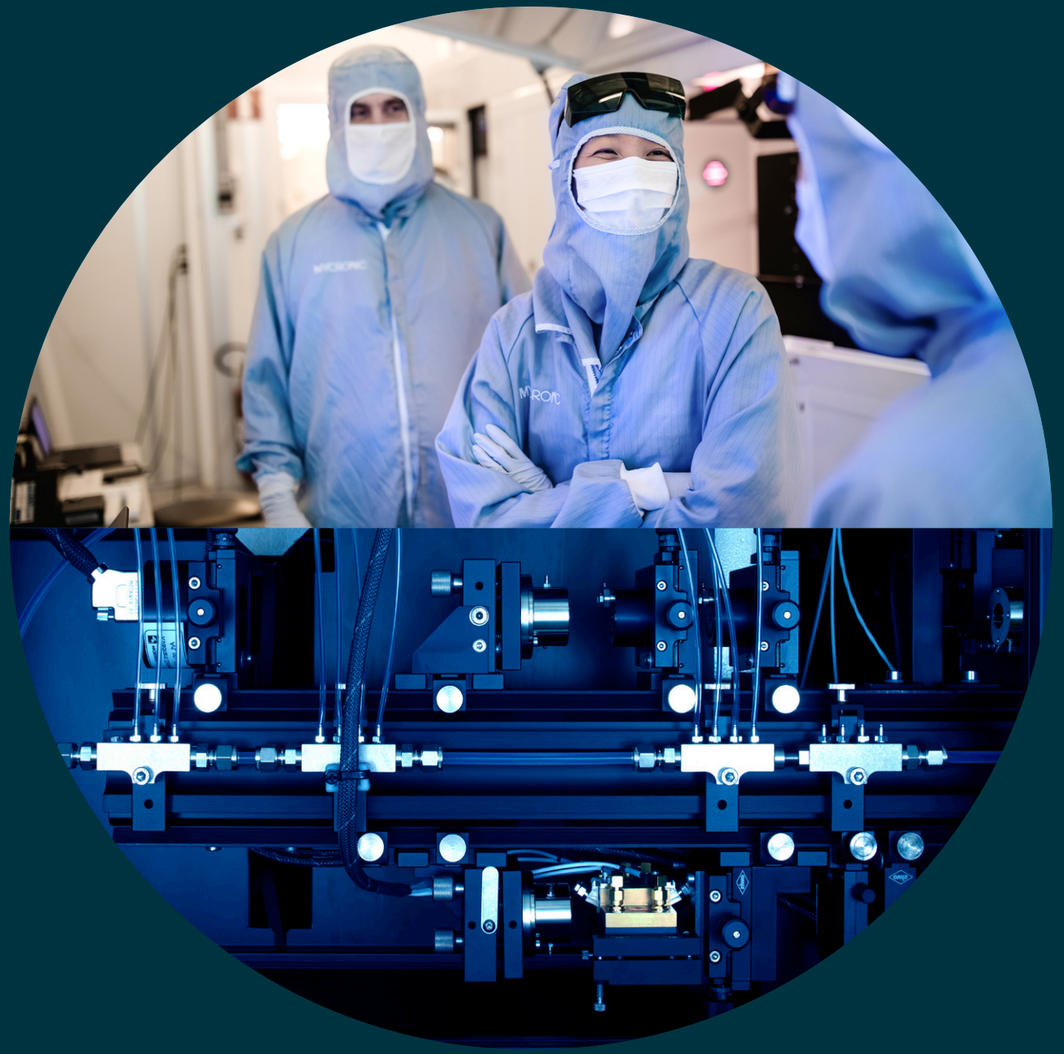
The FPS series has field-proven stability, high productivity and great writing quality, and is now re-launched with the FPS 6100 Evo and FPS 6100E Evo – designed to achieve superior image quality and productivity and, win the competition within multi-purpose market.

FPS 6100 Evo for chrome mask

KEY SPECIFICATIONS	LEVEL 80	LEVEL 60	LEVEL 40	LEVEL 25	LEVEL 20	LEVEL 15
Writing speed (mm^2/min)	525	1 250	2 600	6 000	8 000	12 000
XT mode (mm^2/min)	650	1 500	4 500	8 500	12 000	20 000
Minimum lines and spaces (pitch/2)	0.75 µm	1.2 µm	2.0 µm	3.5 µm	5.0 µm	7.0 µm
CD Uniformity (3σ)	30 nm	40 nm	60 nm	80 nm	100 nm	200 nm
Overlay (3σ)	70 nm	85 nm	100 nm	120 nm	140 nm	160 nm
Max. mask size (mm)	813x813					

FPS 6100E Evo for emulsion mask

KEY SPECIFICATIONS	LEVEL 25	LEVEL 20	LEVEL 15
Writing speed (mm^2/min)	5 000	10 000	12 000
Minimum lines and spaces (pitch/2)	5 µm	7 µm	10 µm
CD Unformity (3σ)	250 nm	350 nm	450 nm
Overlay (3σ)	120 nm	140 nm	160 nm
Max. mask size (mm)	813x813		



KEY HIGHLIGHTS:

- 6 different optical levels for chrome mask writer
- 3 different optical levels for emulsion mask writer
- XT mode for FPS 6100E to enhance writing speed up to 73% compared to standard mode
- Various loader solutions: MLU, HMU and fully automated PLS
- Various configurable options that customer can choose depending on users' business strategy



KEY HIGHLIGHTS:

- Two optical levels to choose
- Capable for very large substrate size handling
- Various loader solutions: HMU, Semi-automated HMU and fully automated PLS

FPS 10 Evo & FPS 8100 Evo
Laser photomask writer for Fine Metal Mask application

The FPS 10 Evo is the latest FPS Evo series which specially designed for Fine Metal Mask application to support growing demand for AMOLED displays expanding to IT consumer electronics. Those AMOLED displays for IT will be produced from Generation 8 RGB OLED fabs which will require very large fine metal mask size as well as for photomask.

With the build up experience from FPS and G10 Photomask writer, FPS 10 Evo meets all requirements for Fine Metal Mask application up to generation 8 size substrate size.

The FPS 8 Evo can handle photomask to manufacture display generation 6 size of Fine Metal Mask.

FPS 10 Evo for chrome mask

KEY SPECIFICATIONS	LEVEL 40	LEVEL 25
Writing speed (mm^2/min)	≥4 000	≥6 500
Minimum lines and spaces (pitch/2)	2 µm	3.5 µm
CD Uniformity (3σ)	60 nm	80 nm
Overlay (3σ)	100 nm	120 nm
Max. mask size (mm)	1700x2000 and 1550x2050	

FPS 8100 Evo for chrome mask

KEY SPECIFICATIONS	LEVEL 40	LEVEL 25
Writing speed (mm^2/min)	4 500	6 500
XT mode (mm^2/min)	6 000	10 000
Minimum lines and spaces (pitch/2)	2 µm	3.5 µm
CD Uniformity (3σ)	60 nm	80 nm
Overlay (3σ)	100 nm	120 nm
Max. mask size (mm)	1 100x1 660 and 1 400x1 620	

Bringing tomorrow's electronics to life

MYCRONIC

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