

YieldStar S-1375F

Description

The YieldStar S-1375F is a stand-alone metrology system that measures in-device overlay and CD for after-etch applications.

By utilizing the YieldStar S-1375F's unique high-NA system, customers can measure device overlay and CD with speed and accuracy. This capability enables hyper dense sampling and faster feedback of after-etch data to the TWINSCAN and etchers.

Key Features and Benefits

Building on the proven YieldStar S-375F platform, the YieldStar S-1375F implements specific innovations to improve in-device overlay and CD measurements. The YieldStar S-1375F enables the following applications:

- On-product After-Etch Overlay and CD measurements for memory devices, using the actual device pattern
- On-product After-Etch Overlay and CD measurements for logic devices, enabled by the use of small 5x5 μm targets

Increased Sampling

The YieldStar S-1375F provides much denser sampling compared to current metrology tools, based on electron beam metrology, improving move-acquire-measure (MAM) time by more than 25x. This innovation feeds advanced overlay control loops, in conjunction with ASML's Overlay Optimizer 3 and Pattern Fidelity Control enhancements.

Accuracy and Process Robustness

The YieldStar S-1375F re-uses the continuous wavelength concept from the YieldStar S-375F platform, enabling faster switching time, improving multi-wavelength acquisition move-acquire-measure time. Further improvements in the detection optics improve signal-to-noise of the measurement signal, increasing the accuracy and robustness of the YieldStar S-1375F measurement recipes.