

ADVANTEST[®]

MASK MVM-SEM[®]

E3650

Multi-Vision Metrology SEM Tool Supporting
Sub-10nm Node Photomask Patterning



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The E3650 uses Advantest's proprietary electron beam scanning technology to measure fine pattern dimensions on photomasks with higher precision and stability. It is the newest entry in the company's E3600 series, which has been widely accepted in the photomask SEM market. It enables measurement throughput to be doubled compared with the previous model, the E3640. E3650's higher throughput enables massive measurement required by more complex patterning and increased number of masks due to multiple patterning. In addition to leading-edge photomasks, the new tool also demonstrates superior performance when measuring EUV masks and master templates for nanoimprint applications.

E3650 Features

- **MAM Time, Measurement Precision Greatly Improved**

Compared with the previous model, the E3640, the new tool improves MAM Time by 1/2, and measurement accuracy by 30%.

* MAM Time = Move Acquire Measure Time

- **Large Field Measurement**

High-accuracy wide-field SEM images enable multi-point simultaneous measurement. In addition, the E3650's high precision SEM contour image extraction function powerfully supports lithography simulation.

- **Improved Long-Term Stability of CD Measurements**

The E3650 utilizes focus control with the Z stage and in situ ozone cleaning technology, making long-term stable CD measurements possible without adjustment.

- **DBM (Design Based Metrology) Support**

Design-based metrology enables multi-point measurement recipes to be automatically generated and high-precision measurement of hot spots and fine patterns to be carried out.

- **3D Observation**

Like previous models, the E3650 can reconstruct 3D images from multiple detector outputs.

MVM-SEM is either a registered trademark or a trademark of Advantest Corporation in Japan, the United States and other countries.



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<https://www.advantest.com/>

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