



1. Title:	Tools for EUV-Resist Characterization
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3. Abstract body:

AIXUV GmbH has designed a tool for grayscale resist exposures and installed the first system at Infineon in Erlangen, Germany in October 2002. This first system already was capable of printing 50 nm lines and spaces using contact stencil masks. Recently the tool was upgraded and a more powerful version was installed in Korea. Improved stencil masks with more complex features like ellbows, contact holes, and free standing lines are also available now.

As resist outgassing behavior becomes more and more of interest, a third generation of the resist characterization station was designed. The new concept now includes a quadrupole mass spectrometer for residual gas analysis as well as witness plate measurements with on-line reflectometry for accelerated contamination quantification measurements. The design of the vacuum vessel is optimized for cleanliness and good limits of detection for the outgassing specimens of interest in the RGA. To get realistic results for the contamination measurements one design criterium was to achieve an EUV power level at the wafer that is comparable to the situation in the production tools.