



Standard Revision: SEMI P37-1109 SPECIFICATION FOR EXTREME ULTRAVIOLET LITHOGRAPHY SUBSTRATES AND BLANKS

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Outline

- **Background**
- **Key Revisions**
- **Plans**





Background

- **P-37 appendix**
 - contained some performance indicators which were not covered in the ITRS
 - The ITRS is now being revised and the appendix information is no longer needed
- **Current reflectivity specifications**
 - Based on measurements of spectrum characteristics
 - Difficult to measure
 - Alternative method being proposed for incorporation into P-37
- **New knowledge on particle mitigation and reticle grounding**
 - New ground interface for EUV reticles needs to be considered



Key Revisions

- **Defining alternate method for determining EUV blank reflectivity uniformity would result fewer blank specifications**
- **Remove appendix of related information**
- **Add location and film properties for grounding**



Reticle grounding locations need to be considered for particle mitigation



4. Potential modification of SEMI standards

- Locations for grounding
 - Grounding locations should be specified in SEMI P37(Mask) and E152 (Pod).
- Film properties at the grounding locations
 - Film properties at the grounding locations should be specified in SEMI P37 so that the soft contact mechanism can be used.
- Necessity of an electrical connection between the front and back sides of EUVL reticles
 - If EUVL reticles have an electrical connection between the front and back sides, the reticles can be grounded only from the back side and the requirements for film properties on the front side of the reticles can be relaxed.

Kazuya Ota, et. al., 2010 EUVL

20101018

EUVL Symposium 2010

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Next Steps

- **Teleconference March and April**
- **Yellow Ballot – May**
- **SEMI committee adjudication during SEMICON West**