

AMTC panelist for panel discussion No. 2 “The Blank”

Highlight

An EUV mask blank suitable for manufacturing EUV masks for the ASML alpha-demo tool was identified. Blank properties need to be improved to achieve high volume manufacturing specifications.

Evaluating EUV blanks



- Big improvement: LTEM substrates with PV 70nm – 400nm are available.
- EUV performance data of ML is very close to current customer needs.



- Layer stress needs to be improved to minimize IPD.



- Reduction of blank defects. → Defect inspection capability needs to be improved
Blank manufacturing processes need to be improved accordingly.

Special items concerning SEMI P37/38

- Define quality areas for layer deposition, defects, multilayer performance explicitly.
- Definition of flatness in the sense of thickness variation instead of a split into front and backside flatness.
- Maximum and minimum allowed processing temperature allowing preservation of actinic performance of the blank.
- Introduction of a blank label for blank tracking and identification is desired.
- Vacuum compatibility requirements need to be addressed.