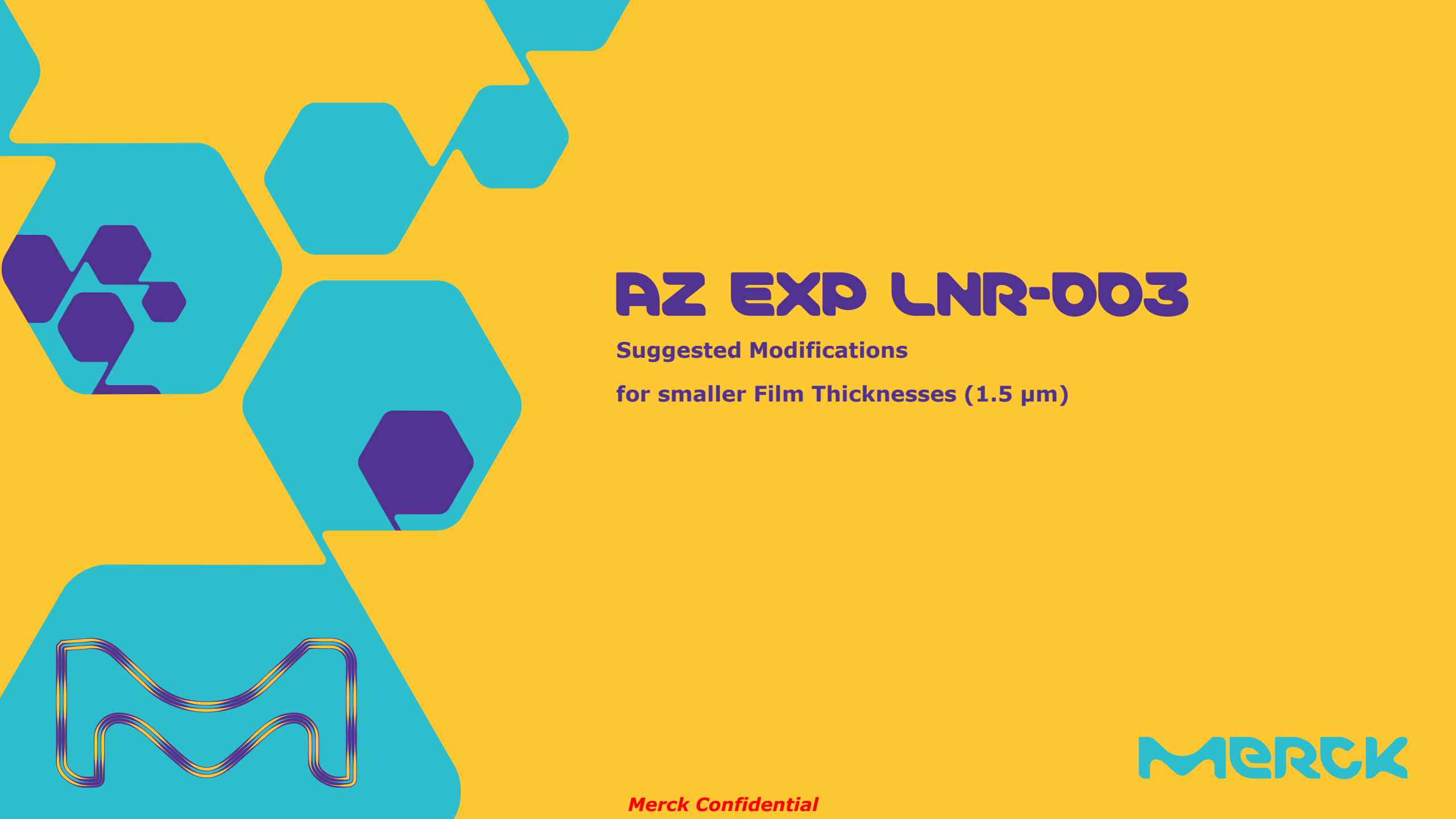




AZ EXP LNR-003

Suggested Modifications

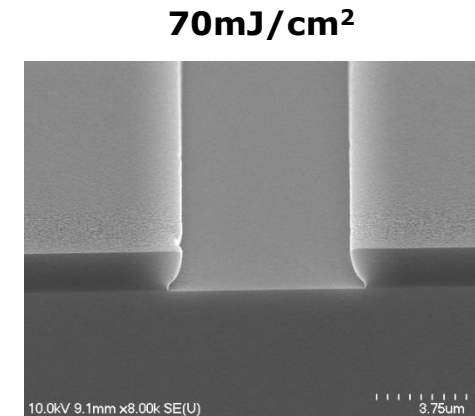
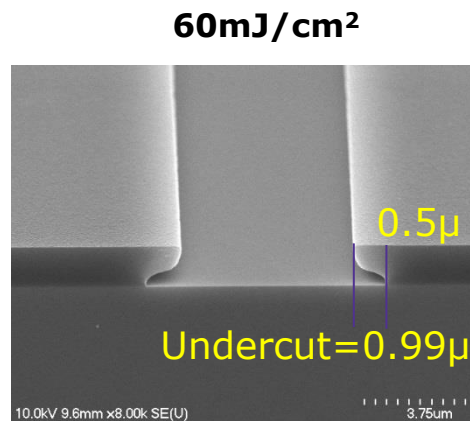
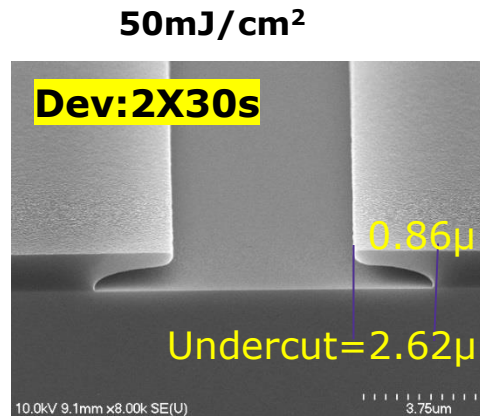
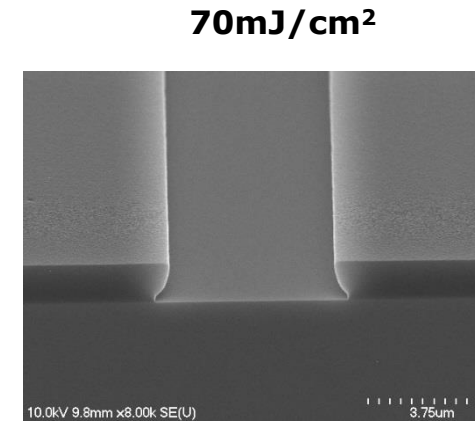
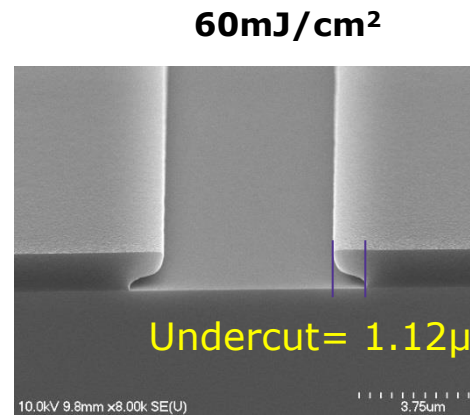
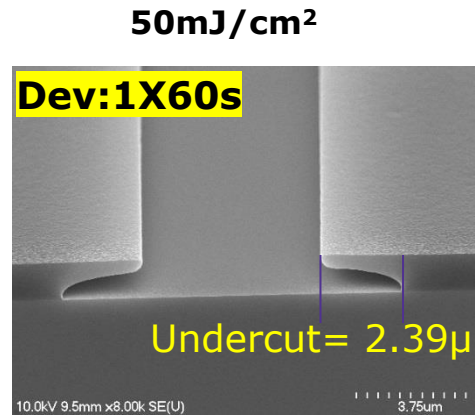
for smaller Film Thicknesses (1.5 μm)

MERCK

Merck Confidential

AZ Exp LNR-003

FT: 1.5 μ
SB: 100 $^{\circ}$ C/90s
PEB: 100 $^{\circ}$ C/90s
ASML i-line
NA 0.48 stepper
F=1 μ
Mask CD: Iso Trench 5 μ





AZ EXP LNR-003

Suggested Modifications

for smaller Film Thicknesses (1.0 μm)

MERCK

Merck Confidential

AZ Exp LNR-003

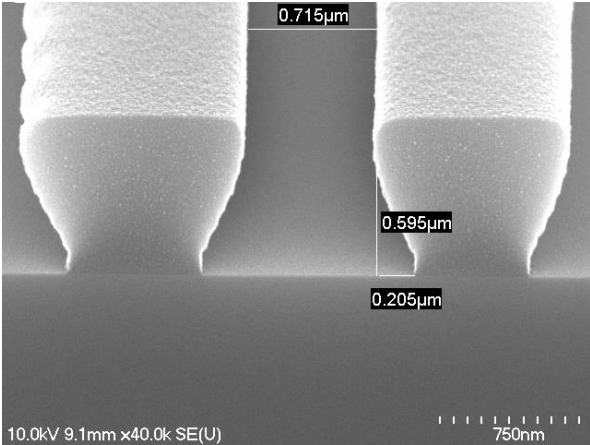
Process Conditions

- **Substrate:** Si-wafer
- **FT:** 0.98 μ
- **SB:** 110°C/ 60s
- **Exposure:** ASML i-line; NA 0.6 stepper
- **Focus:** 0 μ
- **PEB:** Varied
- **Spin Speed:** 2500rpm/30s
- **Development:** 30s, AZ 300 MIF developer
- **Mask CD:** Isolated Trenches: 0.6 μ

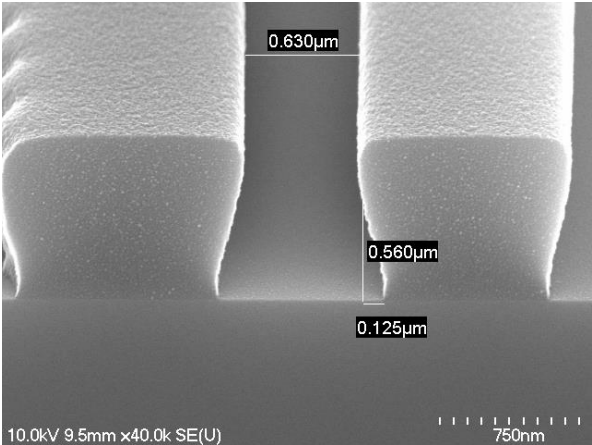
FT	SB	Dev	Mask CD	Exposure	NA	Parameter Varied
1μ	100°C/60s	30s	Iso Trench: 0.3μ	i-line stepper F=0μ	0.6	PEB

70 mJ/cm²

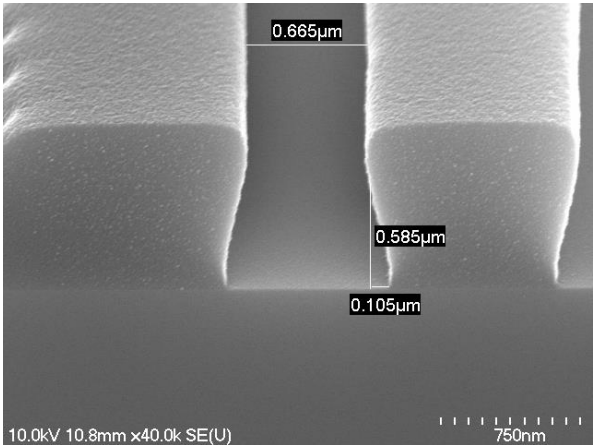
PEB:105°C/60s



80 mJ/cm²



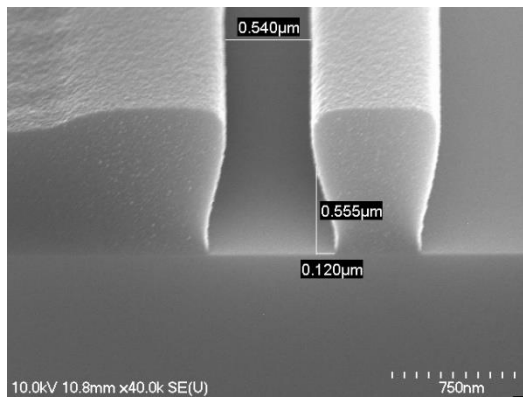
PEB:110°C/60s



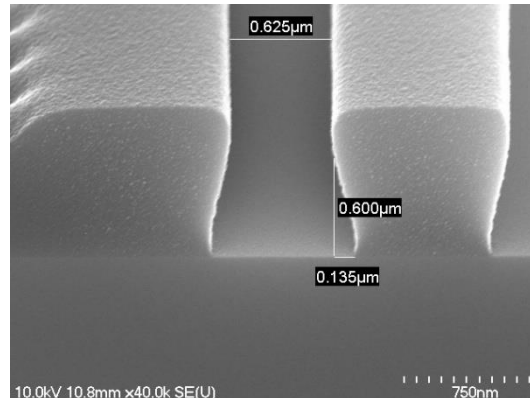
AZ Exp LNR-003

FT	SB	Dev	Mask CD	Exposure	NA	PEB	Dose
1μ	100°C/60s	30s	Iso Trench: 0.3μ	i-line stepper F=0μ	0.6	110°C/60s	70mJ/cm²

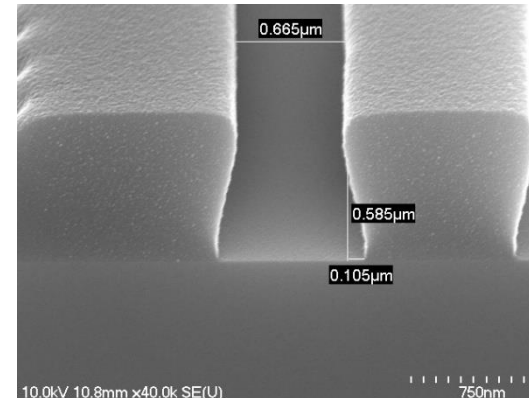
Mask CD: 0.22μ



0.28μ



0.30μ



0.38μ

