

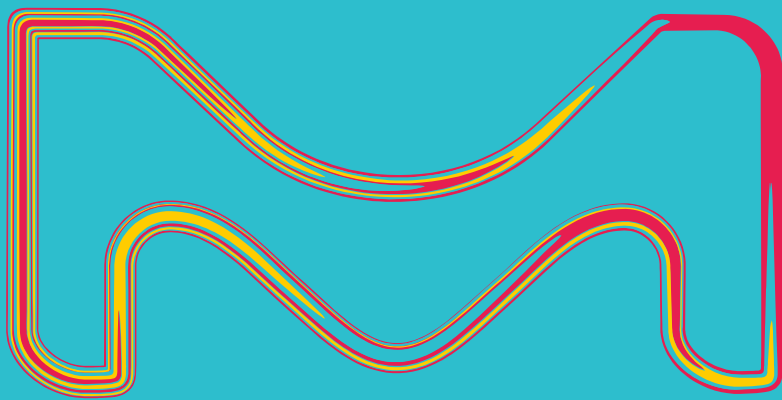
introduction of uv negative tone resist for lift-off

Data Package: AZ LNR-003

Merck Performance Materials
Semiconductor Solutions
R&D and Technical Services
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PIP No. : APTSD19005

MERCK



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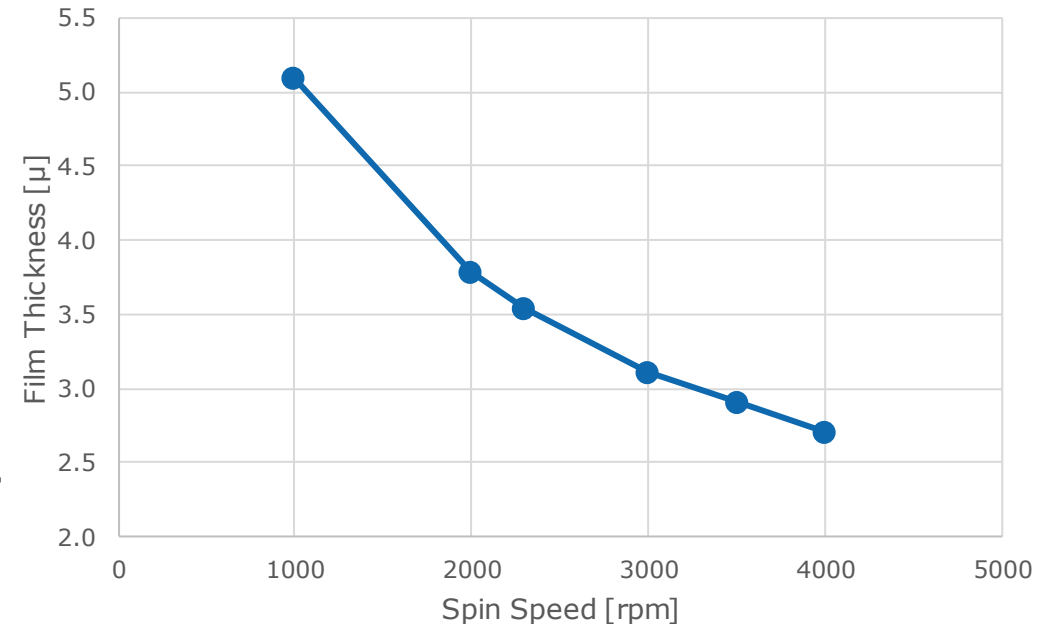
Introduction of AZ LNR-003

Process condition & Spin Curve

Process Conditions (Isolated Trenches: 5 μ m)

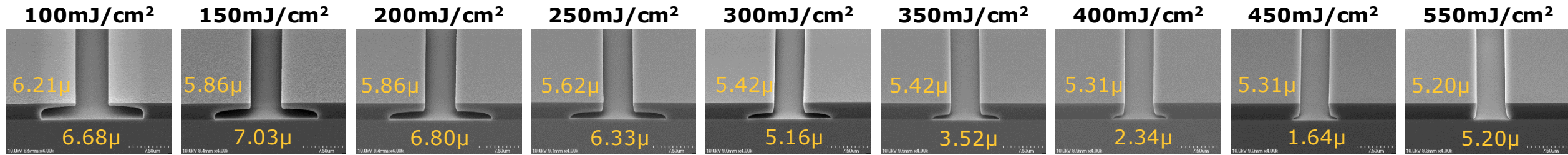
Substrate : Si-wafer
FT : 3.5 μ m
PAB : 120 $^{\circ}$ C/120s
PEB : 100 $^{\circ}$ C/90s
Spin Speed : 2300rpm
Dev : 60s; AZ 300 MIF
Exposure : ASML i-line NA 0.48 stepper

Spin curve of AZ LNR-003



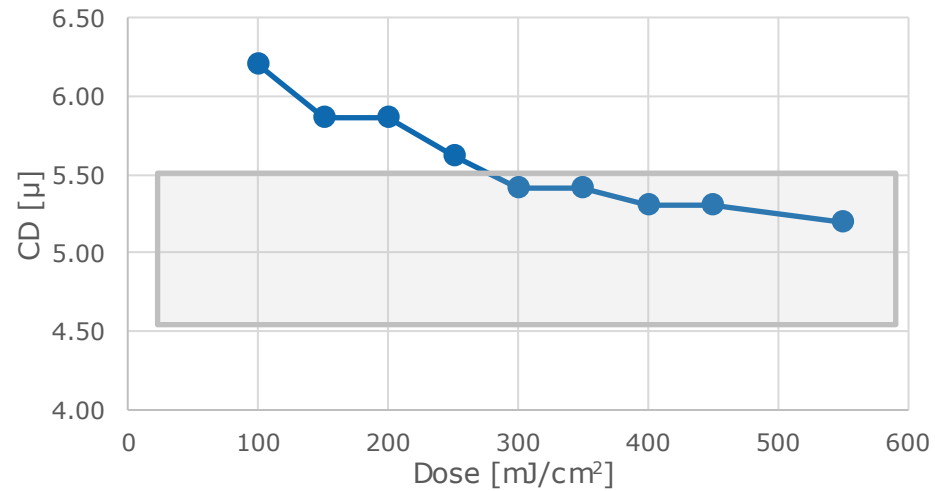
Introduction of AZ LNR-003

Exposure Latitude for 5um iso. Trench@5umFT

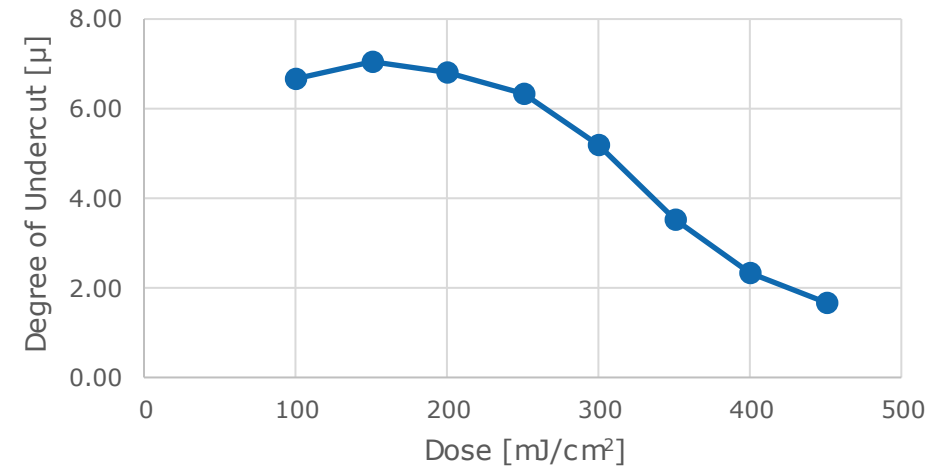


Focus: 1μm

Exposure Latitude



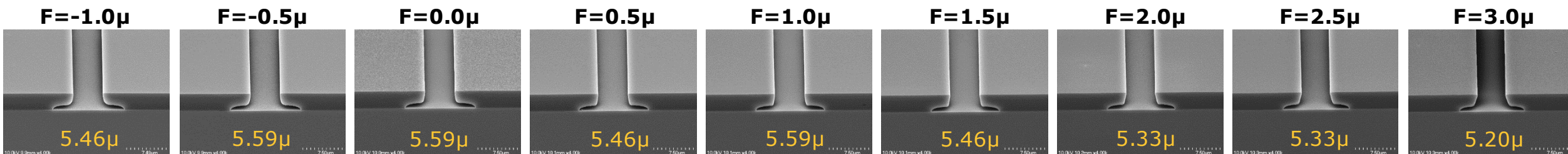
Degree of Undercut



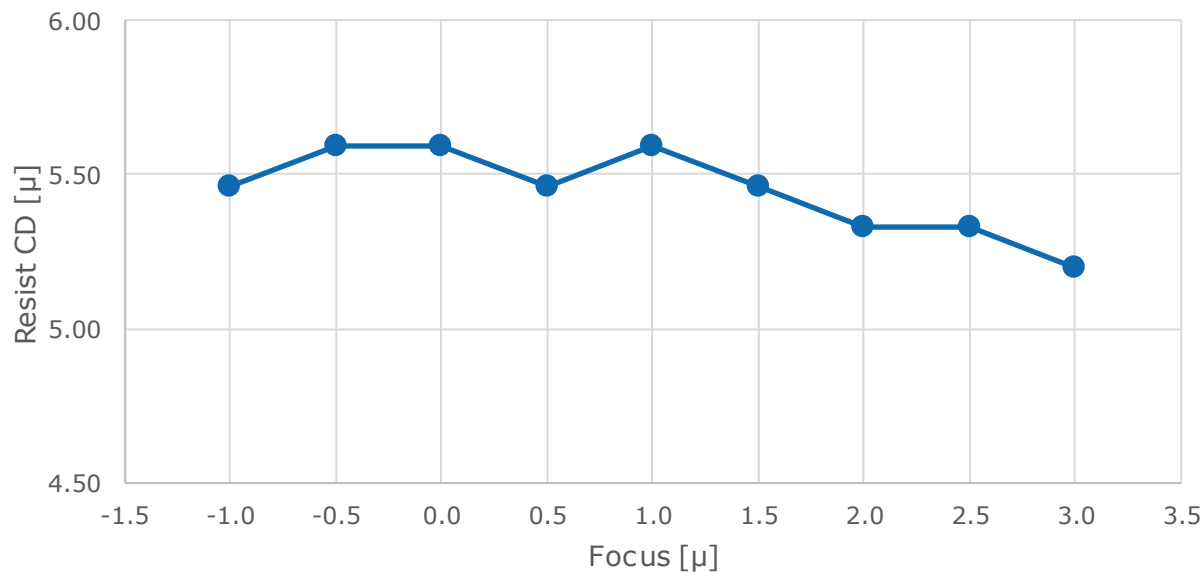
Introduction of AZ LNR-003

Depth of Focus for 5um iso. Trench@5umFT

[Energy: 350 mJ/cm²]



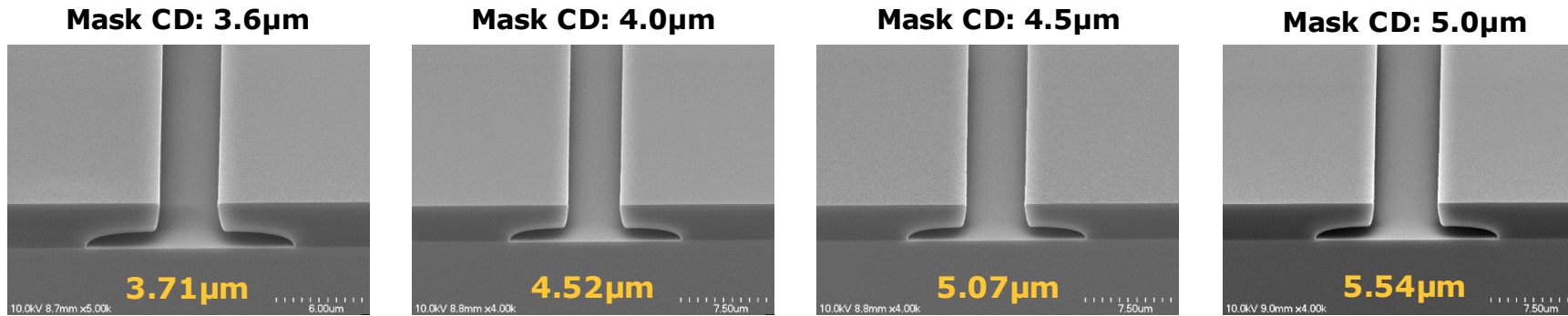
Depth of Focus [350 mJ/cm²]



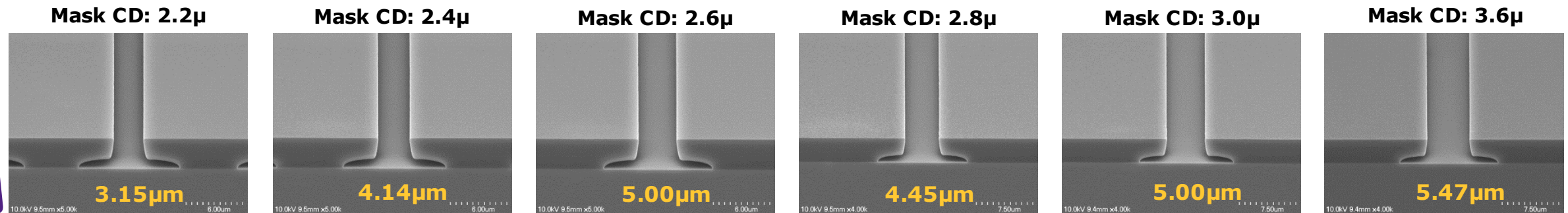
Introduction of AZ LNR-003

Mask Linearity for iso. Trench@5umFT

Linearity [300mJ/cm²]



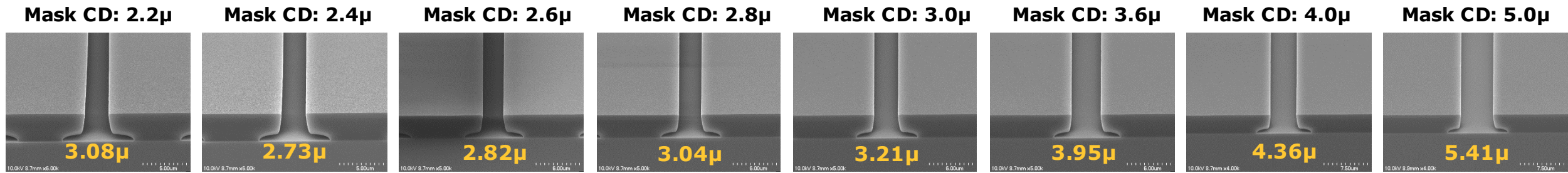
Linearity [350mJ/cm²]



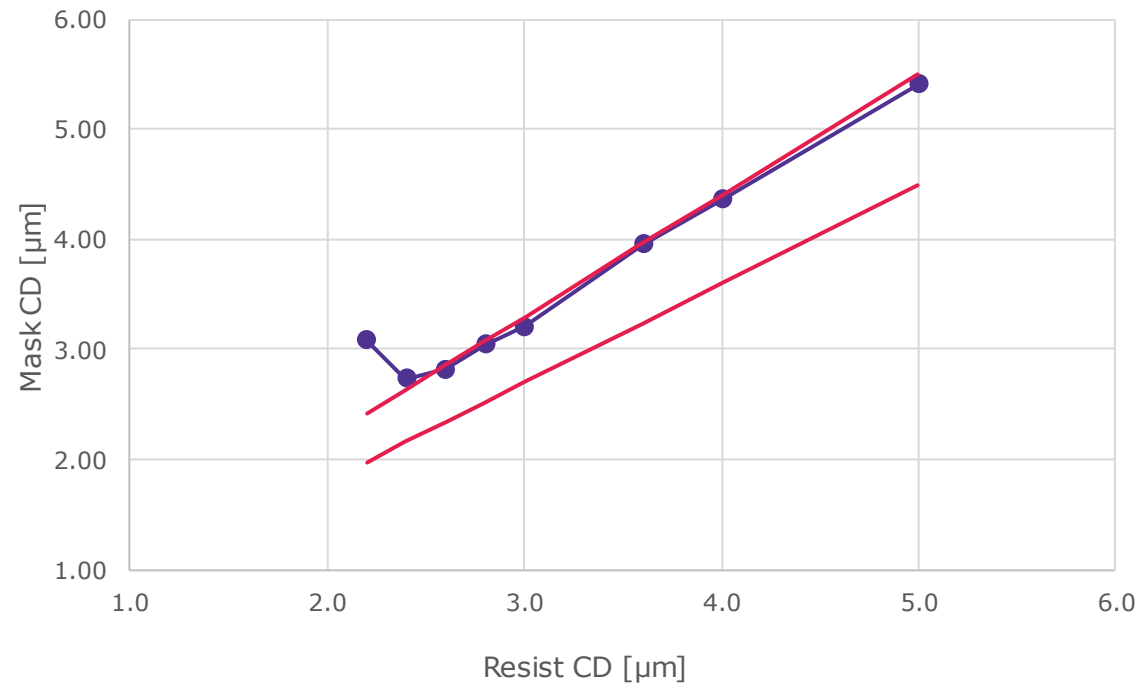
Introduction of AZ LNR-003

Mask Linearity for iso. Trench@5umFT

Linearity [400mJ/cm²]

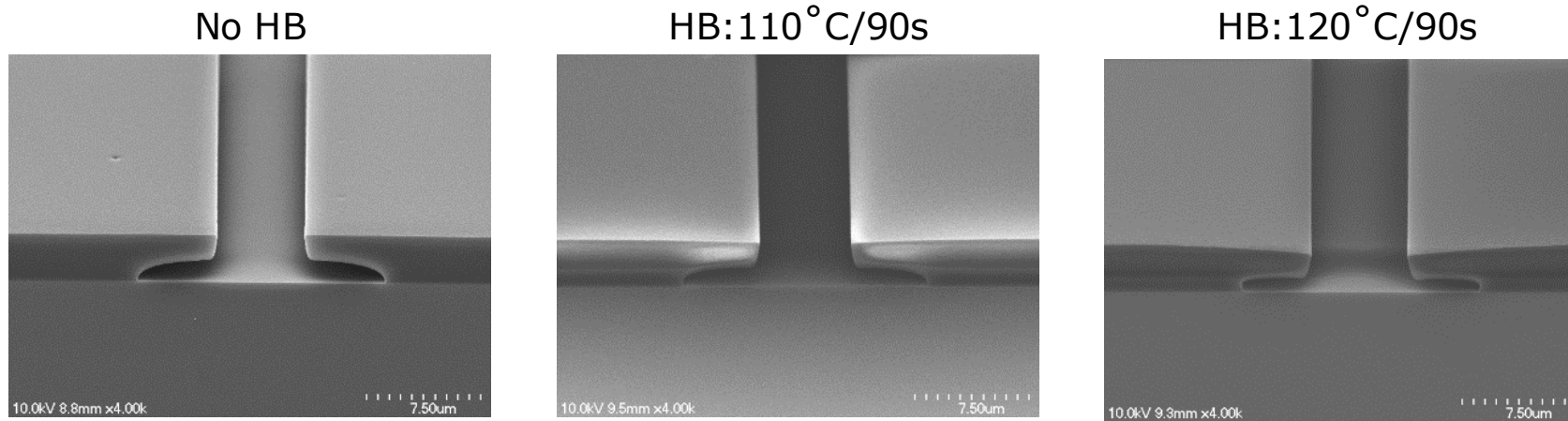


Linearity



Introduction of AZ LNR-003

Thermal Stability for 5um iso. Trench@5umFT



Energy: 200mJ/cm²@best focus

AZ LNR-003 exhibits stability upto 120°C

