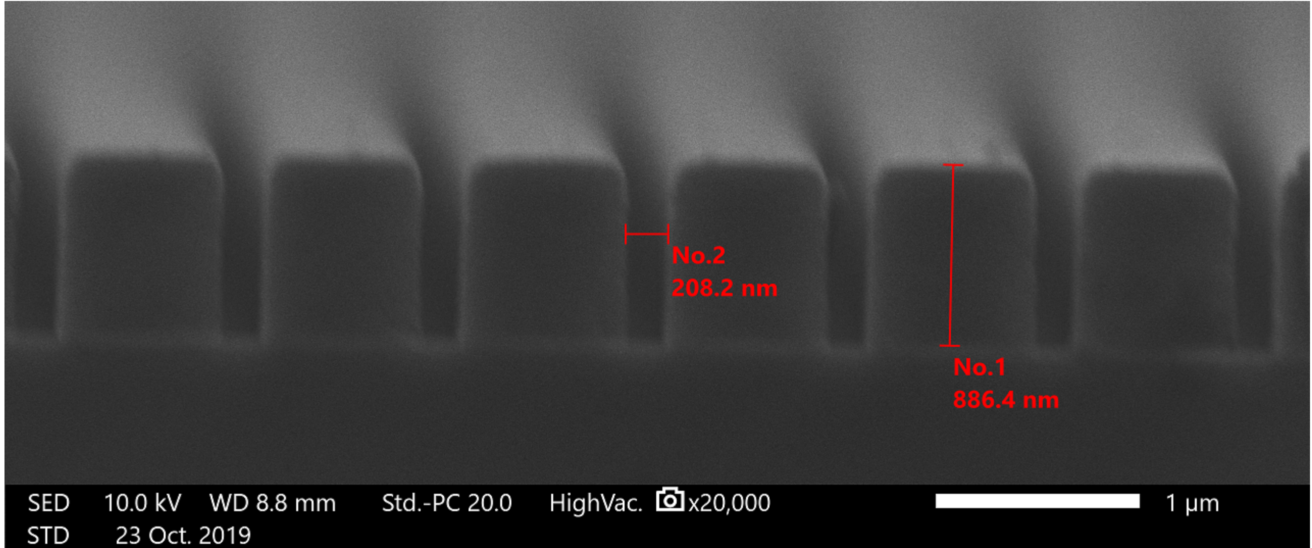
APPLICATION NOTE

High resolution features



Measurements performed on Jeol JSM-IT200

Materials specifications	
Primer:	Silane
Photo resist:	AZ MiR 701 14CP
Developer:	AZ 326 MIF
Substrate:	Soda-lime glass

Process specifications	
Priming:	2000 RPM
Spin Coating:	4000 RPM
Soft bake:	90 Sec @ 90 °C
Expose:	λ = 405nm Dose: 60 mJ/cm^2
Post bake:	none
Developing:	60 sec single puddle

PicoMaster specifications	
System:	PicoMaster 100
Scan speed:	200 mm/Sec
Step size:	200nm
Spot size:	0.3µm

Description

The positive high contrast resist MiR 701 enables the PicoMaster to create features well bellow the specified resolution of 300nm. In the sample the lines where exposed with optimized step resolution, to match the address grid of 200nm.
Make sure in the design phase to have your pattern match the step size. For example, ensure all features are placed on a 100nm grid.

References

- AZ MiR 701 14CP
- AZ 326 MIF

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