

microPRO™ XS for OCF

SELECTIVE LASER ANNEALING FOR OHMIC CONTACT FORMATION (OCF)

The microPRO™ XS system provides selective laser annealing with high repeatability and throughput in a versatile system. Combining a state-of-the-art laser optic module with 3D-Micromac's modular processing platform, the microPRO™ XS is ideally suited for ohmic contact formation (OCF) in silicon carbide (SiC) power devices. It forms ohmic interfaces and cures grinding defects while preventing the generation of large carbon clusters and heat-related damage to the front-side of the wafer.

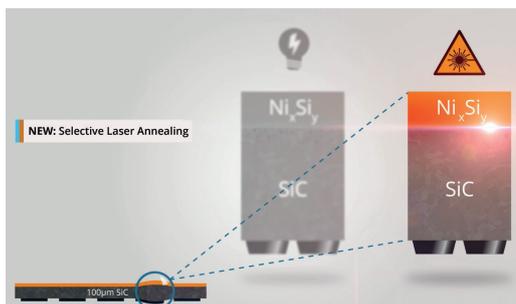
HIGHLIGHTS

- Prevents the generation of large carbon clusters
- Avoids heat-related damage to the front-side of the wafer
- Standard wafer size: 150 mm (200 mm option available)
- Thin wafer handling available
- Best-in-class cost per wafer
- Small footprint
- Flexible recipe programming and wide parameter range





microPRO™ XS for OCF - SYSTEM CONFIGURATION



BENEFITS

- Forms ohmic Ni-silicide interfaces - especially suitable for thin wafer
- Homogeneous process results by spot scanning
- Very high energy homogeneity
- Freely programmable geometry for test pattern, pre-defined parameter sweep recipes
- Full range of services available, including feasibility studies, recipe development, contract manufacturing, pilot production and global customer support

Suitable for	<ul style="list-style-type: none"> • Ohmic contact formation (OCF) for silicon carbide (SiC) power devices
Wafer size	<ul style="list-style-type: none"> • Standard size: up to 150 mm (6") wafer • Option: up to 200 mm • Wafer standard thickness: 100 - 500 µm
Laser source and beam delivery	<ul style="list-style-type: none"> • ns UV DPSS laser • Fluence on wafer: 0.5 ... 4 J/cm² (with 80 µm spot) • Galvo scanning device • Integrated monitoring of laser energy • High-quality spot homogenization
Alignment	<ul style="list-style-type: none"> • Automatic wafer alignment
Process chamber	<ul style="list-style-type: none"> • Inert gas chamber • Standard: nitrogen, others on request • O₂ concentration monitoring
Options	<ul style="list-style-type: none"> • Fully automated open cassette wafer handling - thin wafer approved • ID Reader for wafer and/or cassette • SECS/GEM implementation • Filter fan unit/active exhaust system • Clean room class ISO 3 for process chamber and wafer handling area
Standards	<ul style="list-style-type: none"> • Compatible with common SEMI standards • Laser safety class 1 • Clean room class ISO 5
Footprint	<ul style="list-style-type: none"> • 1,140 x 2,900 mm² including handling