

microPRO™ XS OCF

SELECTIVE LASER ANNEALING FOR OHMIC CONTACT FORMATION (OCF)

The microPRO™ XS OCF 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 while preventing the generation of large carbon clusters and heat-related damage to the front-side of the wafer.

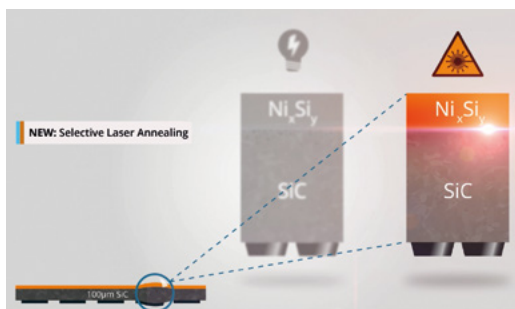
HIGHLIGHTS

- 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)
- Wafer handling available
- Best-in-class cost per wafer
- Small footprint
- Flexible recipe programming and wide parameter range





microPRO™ XS 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 patterns
- 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 device wafers
Wafer size	<ul style="list-style-type: none"> • Standard wafer diameter: up to 150 mm • Optional wafer diameter: up to 200 mm • Standard wafer thickness: 100 - 500 µm • Capability for wafers on glass carrier
Laser source and beam delivery	<ul style="list-style-type: none"> • ns UV DPSS laser • Fluency on wafer level: 0.5 ... 4 J/cm² • Flat top laser spot profile • Galvo scanning device • Integrated monitoring of laser energy and beam profile
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
Standards	<ul style="list-style-type: none"> • Compatible with common SEMI standards • Laser safety class 1 • CE conformity
Footprint	<ul style="list-style-type: none"> • 1,340 x 3,200 mm² including handling