

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 reduces particle generation due to process routine and chamber layout.

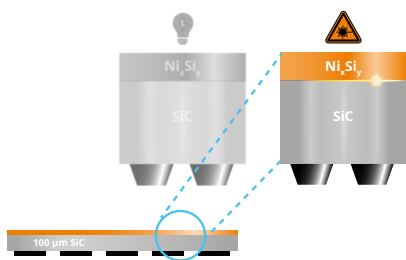
HIGHLIGHTS

- Best in class throughput (up to 17 WPH) – 150-mm wafers can be processed in a single step
- Standard wafer size: 150 mm (200 mm option available)
- Thin-wafer handling available
- Small footprint
- Wide and stable process window





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