microDICE™

TLS-Dicing™ System for Separation of SiC Wafers

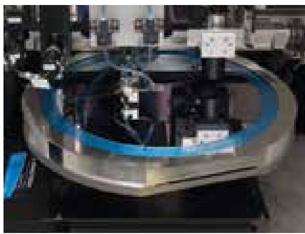
3D-Micromac's high-performance microDICE™ laser dicing system separates wafers into dies using TLS-Dicing™ technology (Thermal-Laser-Separation).
microDICE™ significantly reduces the dicing cost per wafer. Cleaving with microDICE™ provides outstanding edge quality while increasing the yield and the throughput, especially for SiC.

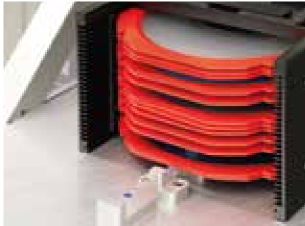
microDICE™ offers:

- Significant higher throughput due to dicing speed up to 300 mm/s
- Minimal cost of ownership
- More dies per wafer by reduced street width

3D MICROMAC

microDICE™ - System Configuration





The microDICE™ standard system configuration consists of:

- Cleaving function
- Soft scribe function
- Micro stretching function

Available options:

- Automated wafer handling
- Second unit for scribing
- SECS/GEM interface
- Filter fan unit
- Drying unit

Wafer size	• Up to 300 mm (12") wafer size
Laser sources	• Two integrated long lifetime, low maintenance fiber laser sources • One fiber laser source for cleaving process • One fiber laser source for soft scribing process
Positioning system	• Direct driven XY-gantry system • Rotation axis with vacuum chuck • Z positioning system for laser optics and cameras • Position accuracy X axis: ± 0.0018 mm, repeatability: ± 0.00075 mm • Position accuracy Y axis: ± 0.001 mm, repeatability: ± 0.0004 mm
Wafer chuck	• Vacuum chuck up to 300 mm wafer size (tape and frame) • Integrated patented micro stretching function for edge protection
Software microMMI	• Control of all components and parameters • Different user levels supported (administrator, supervisor, operator)
Standards	• Compatible with common SEMI standards • Laser safety class 1 • Clean room class 6
Consumables	• Cooling water, compressed air, electrical power • Only 600 ml DI-water for 1 h active dicing time
Machine dimensions	• 2005 x 2000 x 2090 mm^3 (W x H x D) incl. automatic handling

Changes in accordance to technical progress are reserved.

3D-Micromac AG
Phone: +49 371 40043 0

Technologie-Campus 8
E-Mail: info@3d-micromac.com

D-09126 Chemnitz, Germany
Web: http://3d-micromac.com