Microlution
ML-5/MLTC/MLDS
Shape your future
Machining for a shrinking world

Higher performance in smaller devices

Miniaturization is a clear trend today and the accuracy of features is becoming even more crucial, as manufacturers are challenged to deliver precision parts, to get higher final product performance and to effectively control the price per part. GF Machining Solutions offers the industry’s most complete line of micromachining Laser platforms optimized for small, high precision features to meet the increasing need for the smaller, smarter parts to support today’s leading edge products.

Medical
Advancing medical technology
Minimally invasive surgery limits incision size, reducing hospitalization and healing times and associated pain and risk of infection. This medical trend drives demand for smaller implants and medical devices as well as emerging demand for microparts. Regulatory and margin pressures associated with miniaturization push manufacturers to look for new technologies. GF Machining Solutions offers a new class of high-precision Laser micromachining platforms ideal for the medical device manufacturing industry. Our solutions answer medical device manufacturers’ needs: higher productivity, better quality and compliance with stringent regulations.

Automotive
Boosting auto performance
Automakers envisioned getting more combustion out of the same amount of fuel if they could engineer fuel injector spray flow, angle, droplet size, and fuel mass. The designs were there, but the holes could not be machined to specifications with existing solutions. GF Machining Solutions’ ultrafast Laser platform changed everything, delivering precision microholes on new generations of fuel injectors that improve performance to help meet government emissions regulations and satisfy customers.

Watches
Running like a Swiss watch
The movement of an automatic watch consists of hundreds of extremely small tight-tolerance components. These components have always been difficult to manufacture due to their size, intricacy, and precision requirements. With GF Machining Solutions, watchmakers have found the ideal solution for producing parts at lower costs and with faster cycle times, increasing manufacturers’ productivity. Ultrafast Laser solutions provide speed, accuracy, and quality advantages over traditional micromachining solutions.
Machining at the speed of the light

Femto’s advantages

Experience clean, lightning-fast machining while maintaining high accuracy and productivity, with femtosecond Laser technology. Ultrasorhurt pulsed Laser machining produces no heat-affected zone, delivering perfect microholes in seconds and producing medical devices in a single process. Burr-free engraving of a wide range of materials, from steel, aluminum, carbide, brass, graphite and copper to gemstones, ceramics and polymers, is at your fingertips today.

ML-5
Increase machining quality and repeatability
The ML-5 is industry’s leading ultra-fast Laser micromachining platform, combining exceptional part handling, motion control and real-time position-al feedback to deliver microholes and other features with ultrahigh surface and edge quality.

- Five-axis scanning head
- Five mechanical axis
- Real-time part characterization and validation

MLTC
Simplify complex machining processes
The MLTC is an ultrafast Laser tube cutting platform that quickly and accurately machines complex features in metal and polymer tubes with extreme precision for the medical device industry and for other applications, eliminating most or all post-processing.

- Closed-loop measurement
- Bar feeder

MLDS
Boost your productivity
The MLDS is a dual-station micro-machining platform delivering the same speed, accuracy and quality as our ultrafast Laser platforms for high-volume applications. It is available in dual Laser or hybrid mechanical Spindle ultrafast Laser configurations.

- Five-axis scanning head
- Two active machining stations
- Embedded part measurement and adjustment
- Pick and place automation
At a glance

We enable our customers to run their businesses efficiently and effectively by offering innovative Milling, EDM, Laser, Additive Manufacturing, Spindle, Automation and Tooling solutions. A comprehensive package of Customer Services completes our proposition.

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