

## Friends Laser at LASER China: Innovation from a China Leading PCB Laser Marking Manufacturer



**Suzhou, Jiangsu May 18, 2026 ([Issuewire.com](https://www.issuewire.com))** - The global electronics manufacturing landscape is currently undergoing a significant transformation. As the demand for miniaturization and high-density integration grows, the need for precise traceability has become a non-negotiable standard. Against this backdrop, LASER World of PHOTONICS CHINA (LASER China) serves as a premier arena for the exchange of cutting-edge optical and laser technologies. During the recent exhibition in Shanghai, [Suzhou Friends Laser Technology Co., Ltd. \(Friends Laser\)](#) demonstrated why it is recognized as a China Leading PCB Laser Marking Manufacturer. The company presented its latest advancements at the intersection of precision processing and intelligent manufacturing. Under the theme of empowering PCB traceability through laser innovation, the event highlighted how advanced equipment addresses the evolving needs of modern production lines.

### Technical Depth: Redefining PCB Online Marking

High-performance printed circuit boards (PCBs) require permanent, high-contrast identification codes to ensure rigorous quality control throughout their lifecycle. Friends Laser addresses these challenges through its specialized [PCB online laser marking machines](#), which integrate the following advanced technical features:

- **Integrated SMT Line Automation:** The system is designed for seamless integration into high-speed SMT production lines. It achieves a fully autonomous workflow—from automatic loading and internal board flipping to precision marking and unloading—eliminating the bottlenecks and

manual handling errors typical of offline processes.

- **High-End Laser Source Optimization:** Utilizing premium Ultraviolet (UV) or Green laser sources, the equipment ensures minimal thermal impact. This "cold processing" capability is crucial for marking high-density QR codes and micro-serial numbers on sensitive substrates without compromising the electrical integrity of internal circuits.
- **High-Cost-effective Laser Marking Solution:** Using the premium imported CO2 laser source to mark the characters/ QR codes on the solder mask area, the marking speed can be improved much faster, meanwhile this kind of PCB laser marking machine's ROI can be improved because the CO2 laser source is higher cost-effective key component in the machine.
- **Precision CCD Vision & Post-Marking Verification:** A high-resolution CCD system provides two critical functions: automatic fiducial recognition for ultra-precise positioning and immediate "mark-and-read" verification. This ensures 100% readability and data accuracy before the board proceeds to subsequent assembly stages.
- **Robust Mechanical Stability & Dual-Sided Capability:** Built on a heavy-duty stable platform, the machine supports high-speed XY linear motor movement. The integrated internal flipping mechanism allows for high-speed double-sided marking within a single compact footprint, significantly optimizing the total production cycle time.

### **Application Matrix: From Components to Full Industry Chains**

The versatility of laser technology extends far beyond standard rigid PCBs. Industry requirements vary significantly between sectors like automotive electronics, medical devices, and telecommunications. Friends Laser provides a broad application matrix that covers Flexible Printed Circuits (FPC), IC packaging, and semiconductor components. Each of these applications demands specific calibrations to handle different thermal properties and surface textures.

Material compatibility is a cornerstone of the company's research and development. Engineers have optimized process parameters for diverse materials, including FR4, ceramic substrates, and copper foils. This expertise ensures that the laser interaction does not damage sensitive internal circuits or compromise the structural integrity of the board. Rather than simply providing hardware, the focus remains on delivering integrated solutions. These packages combine laser marking with vision inspection and MES (Manufacturing Execution System) data synchronization. This holistic approach allows manufacturers to achieve a complete closed-loop data environment.

### **Exhibition On-site: Immersive Technology and Professional Interaction**

The LASER China exhibition floor provided a dynamic setting for live demonstrations of these technologies. The SMT online laser marking machine from Friends Laser became a centerpiece of interest for Electronic Manufacturing Services (EMS) professionals. Its compact design allows it to fit into existing production environments without requiring extensive floor space modifications. Attendees observed the equipment's seamless compatibility with standard conveyor systems, which is a vital factor for facilities looking to upgrade existing lines.

Live demonstrations showcased the machine's efficiency in real-time. The Friends Laser equipment completed double-sided marking sequences, including automatic board flipping, in mere seconds. This rapid cycle time is essential for high-volume manufacturing where every second impacts total throughput. Beyond the mechanical display, the event facilitated deep technical dialogues. Senior application engineers from Friends Laser provided one-on-one consultations to both domestic and international visitors. These discussions shifted the focus from simple equipment sales to comprehensive process optimization. Topics such as digital traceability and yield improvement

dominated the technical exchange.

The visual presentation of the booth complemented the technological focus. Dynamic video displays illustrated global installation cases, reflecting the expanding international footprint of Friends Laser. By showing the equipment operating in diverse industrial environments, the brand reinforced its capability to meet global standards. The atmosphere was one of professional collaboration, emphasizing the role of laser technology as a catalyst for industrial maturity.

### **Future Vision: Opening a New Chapter in Industry 4.0 Traceability**

Reflecting on the interactions at LASER China, several industry trends have become clear. The future of laser processing is undeniably moving toward increased intelligence, greener operations, and finer precision. As a prominent manufacturer, Suzhou Friends Laser Technology Co., Ltd. remains committed to the continuous iteration of both hardware and software algorithms. The goal is to stay ahead of the technical requirements of the Industry 4.0 era.

The company's journey since its founding in 2014 has been defined by a commitment to integrity and innovation. By focusing on the "initial intention" of the industry, the organization strives to empower the new energy and automotive sectors with more reliable tools. Innovation in laser welding and high-precision cutting will continue to complement the marking division. As global supply chains demand higher transparency, the role of high-precision marking becomes even more critical. Through persistent research and a customer-centric approach, the path forward involves setting new benchmarks for the global laser equipment market.

For more information regarding advanced PCB marking and laser solutions, please visit:

<https://www.friendslaser.com/>



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