Precision Laser Micromachining Solutions

Jiangyin Deli Laser Solutions Co., Ltd.
About us

Jiangyin Deli Laser Solutions Co., Ltd. is a high-tech enterprise based in Jiangyin City, China. The company focuses on providing laser micromachining solutions for industry and R&D customers worldwide. The company occupies a space of 1600 square meters, and more than 1000 square meters are clean rooms for R&D and job shop. Deli Laser Solutions owns an experienced team of process development and management, and over 30 sets advanced UV lasers, ultra-fast lasers, fiber lasers, CO2 lasers, as well as complete and sophisticated test machines, including 3D microscope, laser interferometer, measuring arms, IR Imager, Laser Beam Profiler, etc.

Deli Laser Solutions offers all kinds of precision micro cutting, drilling, etching, scribing, dicing, ablation, fabrication, engraving and marking with feature sizes of microns, main applications including LED chips manufacturing, touch panel, LCD, consumer electronics, semiconductors, MEMS, lighting and medical industries, as well as R&D, aerospace and military use. The process team has processed more than 1,000 cases of many different materials, including all kinds of metal/alloys, ceramics, semiconductors, transparent materials (glass, quartz, sapphire, etc.).

With advanced laser manufacturing technologies, rich experiences of process development and professional management, Deli Laser Solutions is devoted to customized, cost-effective and complete laser solutions, from process development, feasibility study, job order production to mass manufacturing outsourcing.
Solutions

- Fine cutting
- Precision drilling
- Material Ablation
- Etching
- Scribing
- Dicing
- Marking
- Deep engraving
- Welding
Material

**Metal/Alloys**
Stainless Steel, Aluminum, Copper, Red Copper, tungsten, Molybdenum, Titanium, Nickel, Platinum, etc and many Alloys

**Ceramics**
Alumina, Zirconia, Aluminum Nitride

**Semiconductors**
Amorphous Silicon, Monocrystalline Silicon, Polycrystalline Silicon, SiC, CIGS, CdTe, GaN, etc

**Transparent Material**
Borosilicate Glass, Diamond, Quartz, Sapphire, etc

**Polymers**
ABS Resin and all kinds of films
LED wafer dicing system with UV laser
For LED chip manufacturing with high throughput and long time reliability (7*24 hours). Substrates, such as Sapphire, Copper, Silicon, Cobalt as well as Alloy, can be scribed with high precision.

Wafer breaking machine
As a corollary equipment of wafer dicing system to achieve scribing/dicing, breaking and expanding production process.

Wafer dicing system with pico-second laser
Based on Delphilaser’s process expertise of ultra-fast lasers, the system is latest developed to achieve a better dicing quality and scribing speed, which help to improve 8%-10% luminous efficiency of LED chips.

Silicon wafer dicing system
This system is applied to 8” silicon wafer dicing for semiconductor industry.
**Solar Cell**

### Thin-film solar cell scribing system
Apply to P1, P2, P3 scribing processes of a-Si/u-Si, CIGS, CdTe thin film solar cell mass production with industrial 1064/532/355nm DPSS lasers.

### Thin-film solar cell edge deletion system
With high power disk laser and specially designed dust collecting system, the equipment delivers excellent performance with more efficiency, no pollution, higher precision, and no damage to the glass substrate.

### Laser ablation system for BIPV
High speed and precision laser ablation of thin films, providing a light-transmitting substrate of thin film solar cell for BIPV.

### Crystalline silicon solar cell processing system
Used for feasibility study and process development of high-efficiency photovoltaic cells manufacturing, such as laser doping, grooving, EWT, MWT, LFC, etc.

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Display Industry

Glass cutting system
Equipped with high power DPSS laser or CO2 laser, it is an ideal tool of scribing, cutting and drilling in glass mainly apply for display and semiconductor industries.

Ag layer etching system
Instead of tradition ways, this laser system offers a better yield and smaller scribing width, which helps the designers realize a narrower display screen frame of mobile phones, pads, etc.

Laser dot patterning system
Used for precision etching on the light guide plate to form required dot matrix, which has many advantages over conventional chemical etching, such as simple process, high positioning accuracy, high productivity and environmentally friendly.

ITO patterning system
It is an efficient equipment for patterning a variety of ITO film or other TCO/metal layers coated on glass or plastic substrates as typically used in LCD panel display and touch panel display, which is a dry etching, non-contact single step, direct writing, maskless and ablative process.

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Micro Machining

**Picosecond laser micromachining system**
The system is specially designed to perform high quality micro-drilling, cold-cutting, grooving and milling with minimum thermal effect, free selection of taper and debris free.

**UV laser micromachining system**
This system delivers high performance in cutting, drilling and surface treatment in glass, Ceramic, Sapphire, Silicon, Cu, Alloys and organic films with high throughput, good quality and flexibility.

**Fiber laser cutting system**
Cost-effective and efficient cutting tool of many materials, especially for thin metal sheet, mainly apply to precise cutting of stent, battery electrodes, etc.

**Laser marking machine**
Customized and flexible solutions of laser marking and engraving in glass, crystal, metal, plastic, and many other materials.
Representative Clients

- CASIC
- CETC
- 中国一重
- 中国科学院
- GE
- TECRA
- 美国太阳能实验室
- EPISKY Corporation
- EPISTAR
- SL
- BYD
- TRULY
- EMIS
- 联合光电
- 京东方
- BOE
- ENN 新奥
- GSP
- dolomite
- NPL
- National Physical Laboratory
- Nanyang Technological University
- Aptar
- ASNL
- JDSU
- SUNTECH
- BOSCH
- 三安光电
- Sanan Optoelectronics
- AEM
- 中国工程物理研究院
- Chinese Academy of Engineering Physics
Thank You!

For more Info and Laser Solutions, Please Visit [www.delilaser.com](http://www.delilaser.com)

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