

LAB15U UV FPCB LASER CUTTING MACHINE

UV laser cutting machine is a professional laser cutting machine specially used for PCB board and Flexible PCB board (FPC) depaneling. As UV laser source is just 355nm, so it is the laser cutting process we could call “Cold process”, its laser beam has minimum heat affecting area, will not damage the PCB board. So this type of laser cutting machine is widely used in Electronic industry for PCB depaneling, especially for FPC Depanelling.



Technical Features

Characters of LBA15U UV laser Cutting Machine:

LBA15U UV laser Cutting machine is using diode as laser source with 355nm wavelength, comparing with lamp pumped laser generator, LBA15U has small size, low energy consumption, easy to maintain, marking quality better and high reliability.

- Create a new processing mode, without a mold can be cut by CAD drawings any shape products, shorten the production cycle, the liberation of human resources;
- High accuracy, low drift galvanometer combined with a servo system platform delivers superior micrometer cutting accuracy;
- Stress-free cutting mode and fully automatic CCD positioning system combine to bring the perfect cutting effect;
- High cutting speed, small heat affected zone. Heat affected layer depth 0.05 - 0.1mm, small thermal distortion;
- Perfect cutting quality. Incision edge smooth, no collapse, no cutting residue. The profile of complex and small radius of curvature and other contours can achieve micron-precision cutting. Slit narrow, generally 0.1 to 1 mm;
- Environment Friendly cutting process to avoid the harm to the operator and the environment pollution;

Components of equipment and configuration

LBA15U UV laser cutting machine is made up by laser, the control box, focusing system Computer, Chiller and working table, and CCD Camera. The brief of the main parts are as followed:

Configuration

	Parts	Description
Standard configuration	Laser	LBA15U UV laser of 15W, SP Brand of USA
	Control box	Laser power
	Cooling system	Water cooling
	Scanner	German Scanlab brand high speed
	Focus mirror	Scan scope 50mm×50mm square
	Marking software and computer	IPC, 3.3GHZ, 4GB memory, 500GB disk
	Movement table	400mmX400mm linear motion platform Positioning accuracy: $\pm 5\mu\text{m}$; Repeated positioning accuracy: $\pm 2\mu\text{m}$
	Max processing area	435mmX335mm, Processing speed: $< 7000\text{mm/s}$
	Machine Size	1350mm(W) × 1050mm(D) × 1700mm(H)

Internal structure

➤ Laser

- 355nm UV laser marker

 - Laser power 15W

- Power supply

 - 0-20A continuous adjustable switch power

 - External power supply single phase 220V, Max power 1KW

➤ Optical system

- 355nm high galvanometer accuracy reflection, focused beam system

- Mirror: beam reflector five times before expanding

- Galvanometer

 - high-speed high-precision vibration lens

 - Scanner

 - Linear scanning speed Max 7,000 mm / s depends on the material

 - F-θ lens

 - Wavelength 355 nm

 - Scan scope 50mm x 50mm

➤ Computer and control system

 - Control system

 - PCI Bus DA Control Card / Interface

 - Industrial Computer

 - Processor 1.6G、memory≥1G、, 220GB Hard Drive, 17" LCD, English Windows 10 operating system;

➤ Operation software

Marking software is Windows interface, English language operating system compatible with Photoshop, CORELDRAW, AutoCAD and other CAD software; can be achieved in English words, time, dates, barcodes, serial numbers and other markings, and the output in English, graphics, all types of barcodes, two-dimensional codes.

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1°

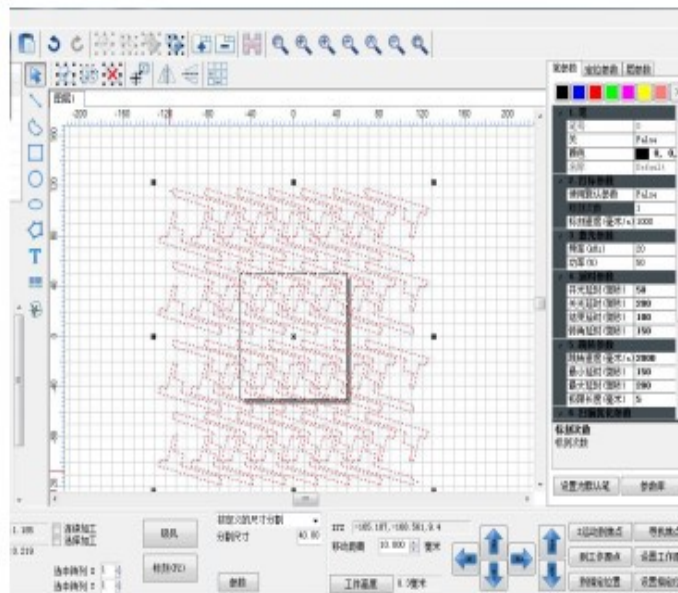
Independent research, powerful function, continuous upgrading;

2°

Powerful database

3°

Easy operation



4°

Layering, Picking up available

5°

Array Process

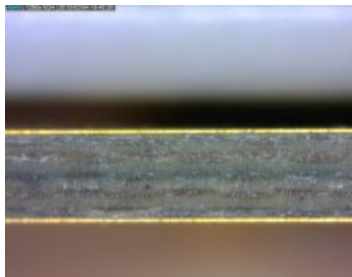
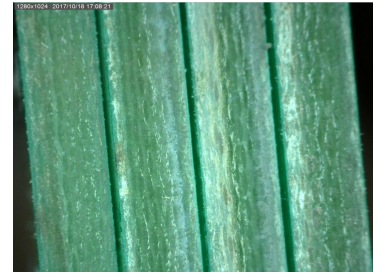
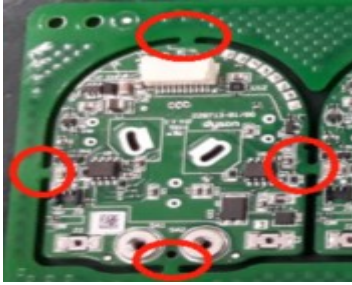
6°

Authorized operation management

Technical parameters

Technical index		LBA15U
Laser source	Laser type	UV
	Wavelength	355nm
	Output power	15W
	Brand	SP from USA
Galvo head	Max speed	7000mm/s
	Distinguish ratio	0.001mm
	Repeatability	0.003mm
Optical output characters	Scan range	Range 50×50mm (Standard)
	Min line width	20um
	Whole Cutting accuracy	± 20um
Cooling system	Cooling system	Water cooling.
Control System	Laser power supply	AC110-220V/50-60Hz
	X-Y Movement table	400mmX400mm linear motion platform Positioning accuracy: ± 5um; Repeated positioning accuracy: ± 2um
	Vision system	Industrial High Resolution CCD System
	Cutting Area	400*330mm

Application Sample photos



Typical clients

