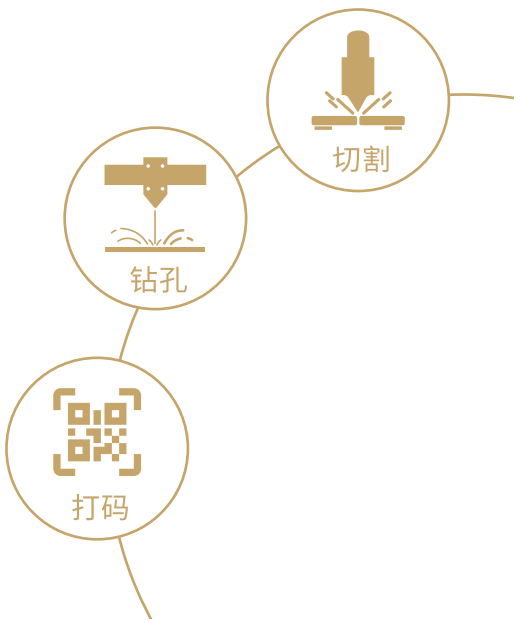
超越激光
Beyond Laser

高端智能化激光装备供应商

HIGH-END INTELLIGENT LASER EQUIPMENT SUPPLIER

精密激光切割/钻孔领军企业

Leading Enterprise In Precision Laser Cutting/ Drilling



产品目录 CONTENTS

01
PCB Series

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CGM Chemical Series

03
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04
Customize

公司介绍

COMPANY
INTRODUCTION

Established
2011年

Employees
150+

Enterprise Mission

企业使命

Innovation to create core technology,
to create maximum consumption value for customers

Enterprise Vision

企业愿景

Self-shaping value,
become a respected century-old enterprise

R&D Team Proportion

32%+

Plant Area

50000m²

Beyond Laser is a high-tech enterprises who specialize in intelligent industrial laser equipment and providing R&D design, production, sales and installation service. Main products: UV laser, IR laser, Green laser, CO2 laser nanosecond, picosecond, femtosecond, etc. a variety of laser sources and collimating focusing systems, galvanometer focusing systems and a variety of optical platform laser equipment.

Beyond Laser adhering to the goal of more than 100 years of brand, more thousands of years of technology and purpose, research and development as the fundamental, innovation as the driver, heavy investment on the laser technology laboratory, has established technological cooperation and personnel exchanges relationship with the United States and Germany laser technology research institutions, and signed with the "211 project university", "985 project university", "2011 plan", "Excellent Engineer Education and Training Plan", playing important role on talent construction of science and technology. Beyond Laser is the leading company in China laser micro processing industry.

Core Values

Customer first Team work Welcome challenge Honest and trustworthy Positive attitude Result is the king

发展历程

DEVELOPMENT HISTORY

2011
- Beyond Laser Founded

2012
- Became a technology-oriented enterprise integrating independent R&D, production, sales and service
- Trademark: Beyond laser

2013
- GUANGDONG top 100 independent innovation enterprises
- GUANGDONG 3A class credit enterprise

2014
- Non-standard automated laser equipment developed
- Obtained 23 software copyright and product patent certificates

2015
- Developed "3D rotating engraving machine"

2016
- Won the national and SHENZHEN "High-tech enterprise"
- GUANGDONG famous brand products
- SHENZHEN top 100 enterprises

2017
- Production plant area 10,000 square meters
- Establishment of SUZHOU branch
- Established osiyuan technology company

2018
- Obtained 13 national patent certificates and 2 software copyrights
- Obtain the national quality and environmental management certificate ISO9001: 2015 and ISO14001: 2015
- Acquisition of high precision linear motor company

2019
- Moved to LONGGANG beyond laser technology park
- OFweek cup for best laser innovation award
- GUANGDONG PCB industry association supplier

2020
- "Double platform cutting machine" start mass production
- The establishment of laser source subsidary for independent research and innovation on laser

2022
- R&D team accounted for 32%
- A total of 12 patents were authorized by the state (Including 3 invention patents)

2023
- Successfully passed the second-class medical device business registration certificate
- Moved to the independent industrial park of "beyond laser technology park"

2024
- Overcome the ceramic suspension cutting technology
- Recognized as "Little Giant" enterprise

2025
- Overcome ultrafast picolaser drilling technology, achieving 10000holes/minute

企业结构 CORPORATE STRUCTURE

2017 Osiyuan Technology Company

Set up machinery manufacturing division,
for automation equipment, hardware products

2017 SUZHOU Branch

Set up SUZHOU branch for developling
the market of East China

2018 Nanshan District R&D Center

Set up a product R&D center to attract
more leading optical laser researchers

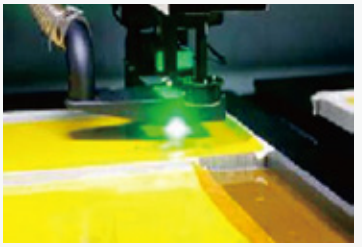
2019 Jingdian Motion Technology

Specialize in linear motor module
and platform

2020 Xingchen Laser

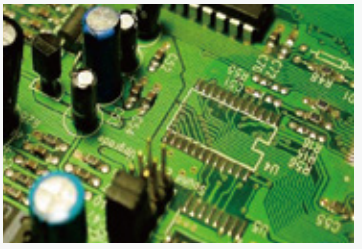
Set up precision laser division mainly
for laser source units research and design

BUSINESS INTRODUCTION



Technical Unit Module

Laser optics, precision machinery, motion control software, machine vision, microelectricity control, robot system.



Application Industry

Semiconductor chip, display panel, PCB&FPC circuit board, touch screen, camera module, medical biology, scientific research institutions, fingerprint identification chips, micro-electronic components.

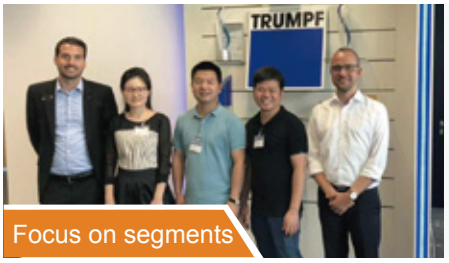
Application Material

Covering film, sensor chip, FPC/PCB, PET film, PI film, PP film, adhesive film, copper foil, explosion-proof film, electromagnetic film, SONY film and other polymer materials, circuit board auxiliary materials, aluminum substrate, ceramic substrate, copper substrate and other thin plates.

Process Way

Drilling, cutting, etching, scribing, grooving, marking.

OUR ADVANTAGE



Focus on segments

10 years

Incubation industry alliance

Focus on ultrafast laser

Beyond Laser and Germany TRUMPF, Dilas, MB"Cognitio" leading laser companies reached a 10-year incubation industry alliance for ultrafast laser, focus on FPC industry, research micro precision laser cutting and drilling applications.

Senior R&D team

36 patents

Process R&D projects

88 patents

Patents and copyrights

Invested heavily on the laser technology laboratory and has established scientific and technological cooperation and talents exchange with laser technology research institutions in the United States, Lithuania and Germany Communicate relationships. The laboratory has a total 36 technological research projects, and signed a contract to build scientific and technological talents with famous universities.

Cooperation alliance

60+

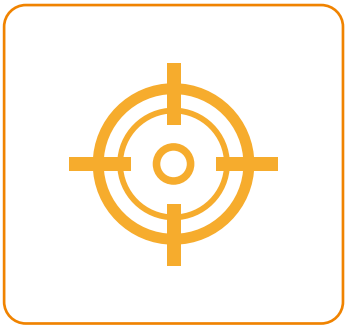
Cooperative listed enterprise

3 sessions

Annual excellent supplier

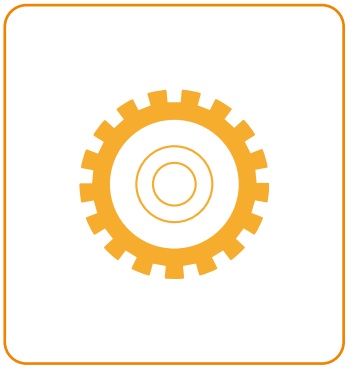
As cooperative company of International circuit board exhibition, cooperate with more than 50 listed PCB enterprises, we have equipment demo in the United States, the United Kingdom and Taiwan China. Beyond Laser is direct supplier of PCB/FPC manufacturing equipment, with "Annual excellent supplier" title.

CORE TECHNOLOGY



Intelligent Laser Technology

- Marking technology
- Precision optical mechanical technology
- Laser and motion control technology
- Laser micromachining technology
- Precision optical design



Intelligent Equipment Technology

- Mechanical design technology
- Module design technology
- PLC software design technology
- Simulation technology
- System integration technology
- Intelligent manufacturing technology

Laser Source Technology

- Fiber-solid hybrid MOPA technology route
- The laser pulse is <10ps, the maximum single pulse energy is >1mj
- Burst mode control circuit
- Trigger modes such as Gate and PSO
- RS232 serial port communication or user interface of software control
- Laser operating temperature real-time monitoring, high temperature alarm system
- Laser parameters quick switching function to achieve multi-layer processing with different process parameters

ENTERPRISE HONOR

By 2024, we have won 65 honorary awards and 88 patent certifications and we are still growing!

65 Honorary Awards




88 Patents Certificate







THE ENTERPRISE CULTURE

PERSISTENCE

UNITY

SERVICE

FAITH

LOYALTY

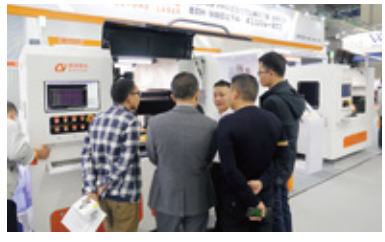
Unity Creat Strength And Wisdom

Work is accomplished in harmony, strength is born in unity

TRADE SHOW

Intelligent Laser Technology Equipment Exhibition

Mainly for PCB/FPC cutting, covering film cutting, ceramic laser cutting, Drilling, marking, medical, scientific research, university laboratory and other special models. Caters to multi-functional, intelligent automation application trends.

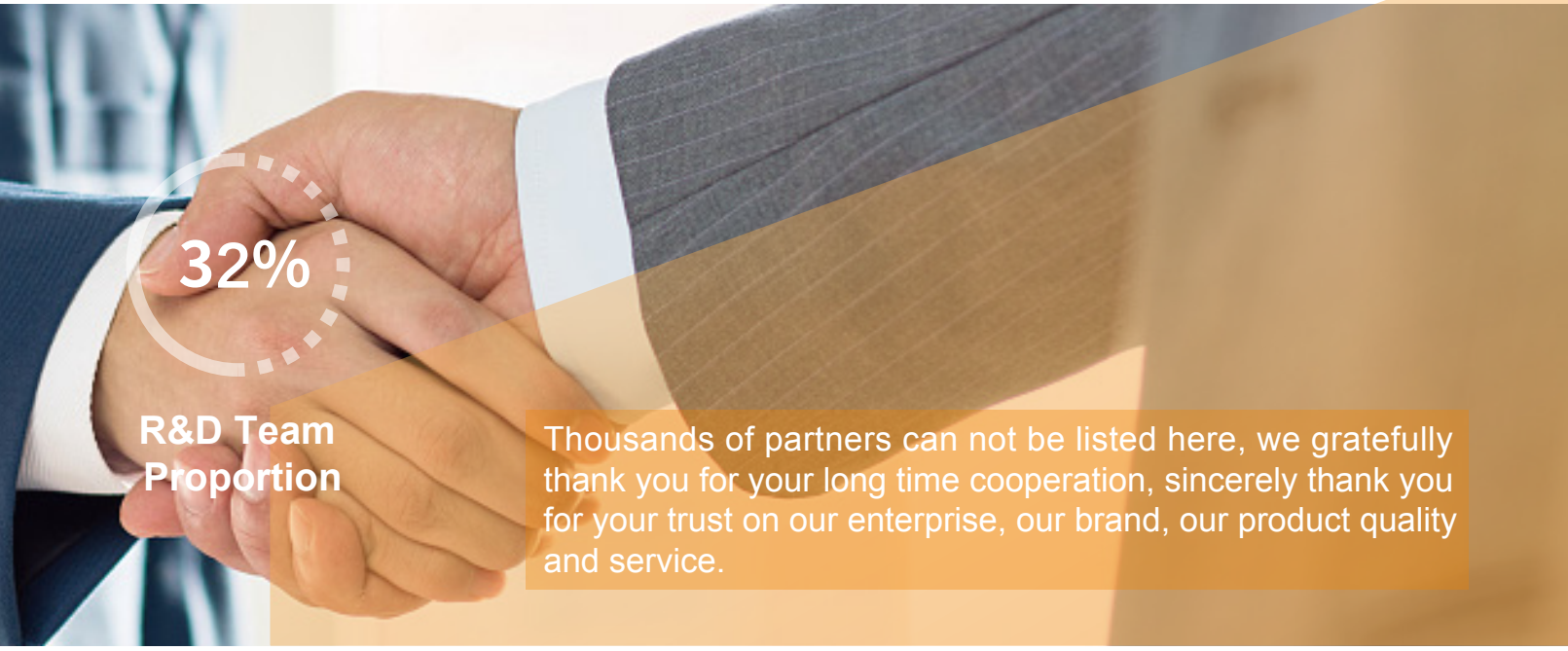


PARTNERS

win-win cooperation

Trust-quality

Customer Site



Till 2026, we have about 1,000 customers in global, including 62 listed companies and we are still growing!

FPC Laser Cutting Series

Pico UV/Green Laser

01 650x550mm
Double Platforms

02 Double Working Table

03 Applicable To Thin Film/
FPC Profile Cutting

Single laser head, double platforms: CY-CT2PZ1-6555 / CY-CT2PL1-6555
Double laser heads double positioning: CY-CT2PZ1-S1-6555 / CY-CT2PL1-S1-6555
Double laser heads double laser systems: CY-CT2PZ2-S2-6555 / CY-CT2PL2-S2-6555

▸ Product Introduction/Advantage

01 Single Laser Head Double Platforms

Two tables for cycle working one by one, no preparing time, high processing efficiency large platform, Single bed size 650x550mm for processing large material, compatibal CVL and profile cutting.

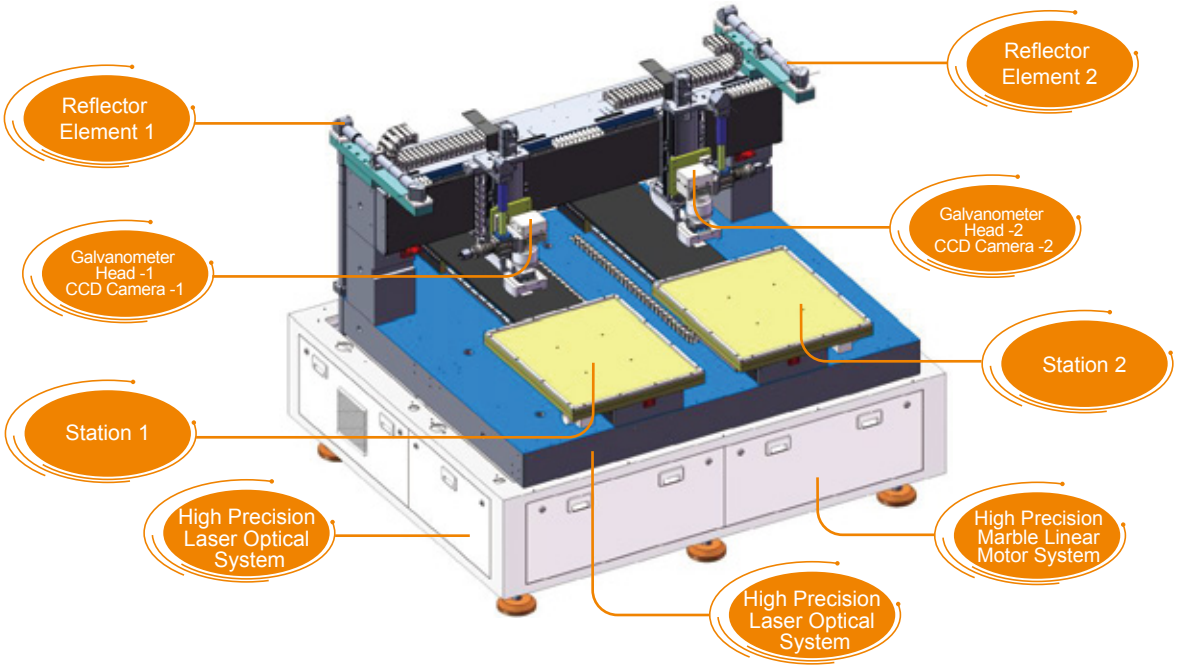
02 Double Laser Head Double Positioning

Double laser head double platforms, dual tables simultaneously processing to acheive double efficiency, capable to cut same materials same profile, fiducial marks separately; intelligent splitting, single laser source, double beam, lower maintenance costs; double platforms, each bed processing area 650x550mm.

03 Double Laser Head Double Laser System

Double laser head double platform, twin heads working simultaneously; high compatibility to cut different types of materials; double laser system, double operation interface; double laser, double beam, dual platforms 650x550mm to cut larger size materials.

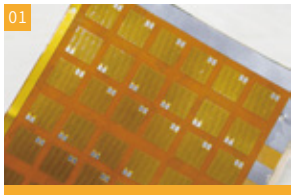
▸ Structure



Double laser heads double positioning/double laser heads double laser system

▸ Application

Mainly used for FPC cutting, compatible CVL and profile cutting, FPC with 3M adhesive, FPC stiffener, FPC multilayer, FPC multi-line profile, FPC golden finger, FPC strip, FPC bend, FPC profile, high density FPC and other materials cutting.


01 FPC With 3M Adhesive


02 Copper Foil FPC


03 FPC Multilayer


04 FPC Multi-line Profile Cutting


05 FPC Golden Finger


06 FPC Strip


07 RF Board


08 FPC Profile

▸ Product Function And Features

01

Effect And Quality

Ultra high cost effective, higher cutting efficiency, compatible to CVL and profile cutting, double platform processing.

02

Little Carbonization

laser pulse width <15 picosecond, slight carbonization, even couldn't be visible by eyes.

03

High Efficiency

Picosecond with high repeat frequancy to megahertz, galvanometer speed reach 3000mm/s, increased 1.5-2 times comparing with nanosecond.

04

Cutting Effect

Using single pulse, Pico laser with high power during processing, high frequency processing, precision cutting, the surface is more clean and smooth.

▸ Parameter

Item	Specification
Applicable products	CVL, FPC, RF, thin multilayer
Operation model	Single laser, single laser head, dual platforms
Machine size	L2150 x W1750 x H1800(mm)
Net weight	3000kg
Processing area	Dual platfroms 650x550mmx2
Total process accuracy	±25μm
Repetitive positioning Accuracy of Linear motor	±2μm
Positioning accuracy of linear motor	±3μm
Stitching accuracy	±10μm
Splitting power Accuracy	Double positioning: ±0.2W
Laser power	Double laser head double positioning: 30W Double laser head double laser system: 30W
Galvanometer Scan range	≤50x50mm
Laser pulse frequancy	300kHz-2MHz
Compensate for expansion and contraction	≦1‰

Item	Specification
Output pulse width	≤15ps
Wavelength	Pico UV: 355nm Pico green laser: 532nm
Cutting line width	20±5μm
Cutting efficiency	800mm - 7000mm/s
CCD	2 Units
CCD positioning accurancy	±5μm
Light spot size	10-25μm
Memory capacity	500G
Air pressure	≥0.6MPa
Cooling way	Constant temperature chiller
Environmental temperature	23±2°C(Non-condensing)
Machine power	Single laser head dual flatfroms: 14KW/380V 50-60HZ Double laser heads double positioning: 12KW/380V 50-60HZ Double laser heads double laser systems: 16KW/380V 50-60HZ
Laser power detection	Dynamometer

Laser Drilling Series

Single head/dual head: cutting, drilling

01 850*850mm Large-format Processing

02 Minor Carbonization Effect

03 Adjustable Pulse Width 200W

（Laser Drilling Machine For Aluminum Sheet）Model：CY-CT1FZ1-8585 / CY-CT2FZ2-8585

▸ Description

Fiber precision laser drilling machine can make cutting and drilling for various aluminum sheets, copper, and alloy materials. The machine is equipped with a precision linear motor cross worktable, and an optional CCD automatic positioning system. It has an integrated and compact structure, with no optical pollution, no power coupling loss, air cooling, and has the characteristics of high efficiency and reliability.

▸ Advantage

01 High-quality Fiber Laser

Adopt high-quality fiber laser, good spot quality, stable output power and long service life.

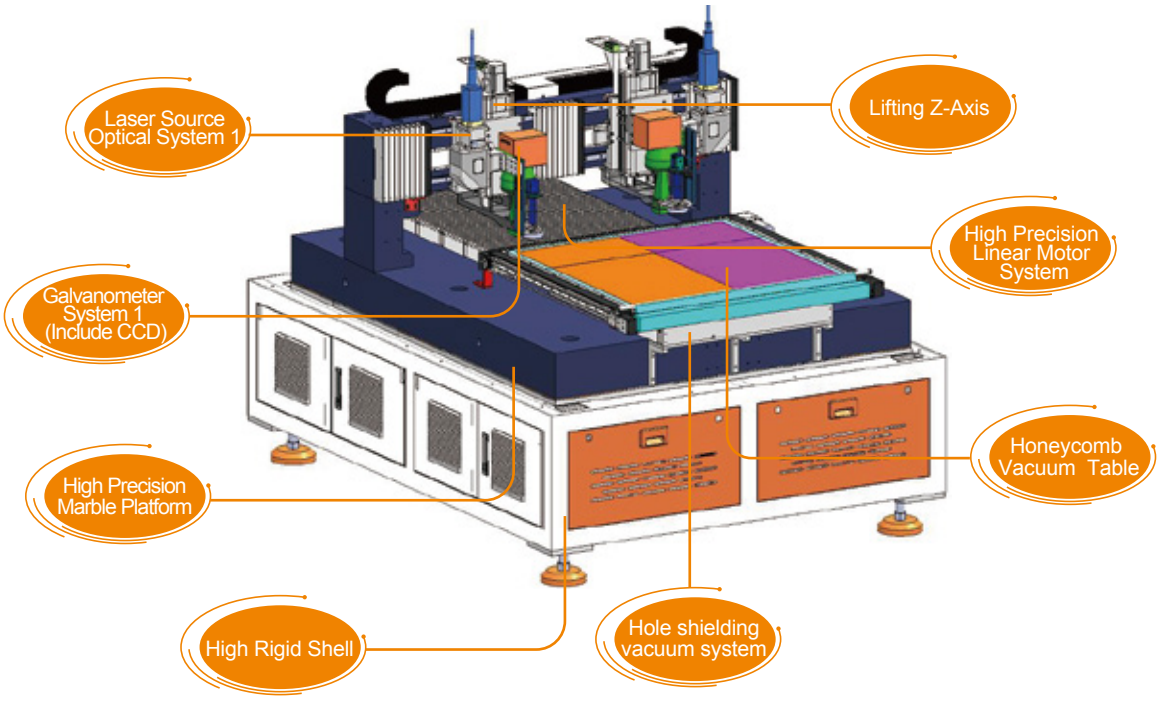
02 Larger Processing Area

850x850mm large-format processing station can process larger size materials with faster speed and higher efficiency.

03 Cutting And Drilling Equipment

Equipment that can make laser cutting and drilling of various copper, aluminum substrates and alloy materials.

▸ Structure



▸ Application

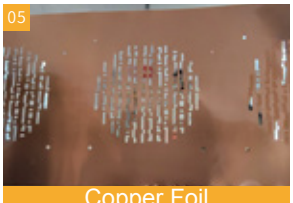
Mainly used for laser drilling, cutting and rapid micro-hole punching of metal materials with a thickness of less than 0.3mm such as copper, aluminum substrates and alloy materials.

Aluminum Sheet Drilling

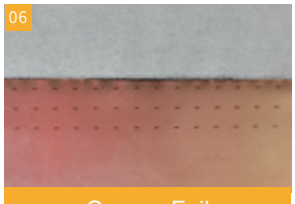
Aluminum Sheet Drilling

Metal Sheet Cutting

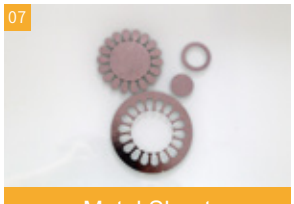
Copper Foil Outline Cutting



Copper Foil Outline Cutting



Copper Foil



Metal Sheet

Stainless Steel Sheet

▸ Product Function And Features

01

Effect And Quality

Single-head/dual-head machine cutting and drilling, the laser spot is small, and the processing surface is fine and smooth.

02

Automation

No contact between the cutting torch and workpiece during processing, no tool wear, fully automatic control, saving labor cost.

03

Fiber Laser

Integrated structure, no optical pollution, no power coupling loss, small and compact structure.

04

Good Cutting Environment

No strong radiation, noise and environmental pollution during cutting, creat a good working environment for the operator's health.

▸ Parameter

Item	Specification
Applicable products	Copper, aluminum substrate, alloy material
Operation model	Single/dual platform fixed
Machine size	L1530 x W2160 x H1860(mm)
Working area	850x850(mm)
Linear motor repetitive positioning accuracy	±2μm
Linear motor positioning accuracy	±3μm
Total accuracy	±0.05mm
Minimum processing aperture	0.1mm
Wavelength	1064nm
Pulse width	2~500ns
Cutting efficiency	800mm - 7000mm/s
CCD	1/2
CCD positioning accuracy	±5μm
Minimum focus spot	25±5μm

Item	Specification
File format	DXF
Diameter of air outlet	50mm / 75mm
Air pressure	0.5~0.8Mpa
Laser cooling method	Air cooling
Environmental temperature	22-28°C
Environment humidity	≤60%
Machine power	10.5/15KW 380V 50-60HZ
Machined product thickness	≤0.3mm
Laser power	200W
Overall machining accuracy	±50μm
Galvanometer scanning range	≤50x50mm
Memory capacity	500G
Target form and grasp size range	Circular,square,cross mark points,minimum graspable 0.8*0.8 (mm), maximum not exceeding the window range

Laser Cutting Series For Thin Film Materials

UV/Green Laser : Pico

01 Roll to Sheet/
Roll to Roll Type

02 Double Working Tables

03 Full Automatic,
No Manual

Model: CY-CT2PZ1-6050R / CY-CT2PL1-6050R

▸ Description

Mainly used for processing 500mm width roll film materials, with comprehensive automation system, one key acheive automtic processing from loading to cutting and unloading .Twin working table design with double efficiency, also with the function of automatic counting and model conversing, further upgrade the processing quality management. Carry on 10 years of professional experience, help the customer fully solve the key problem of operation, cost control, quality assurance, efficiency improvement during their manufacturing and processing .

▸ Advantage

01 Full Automation

New update pico laser machine, equipped with complete automation system, no manual, save labor and time cost, higher efficiency

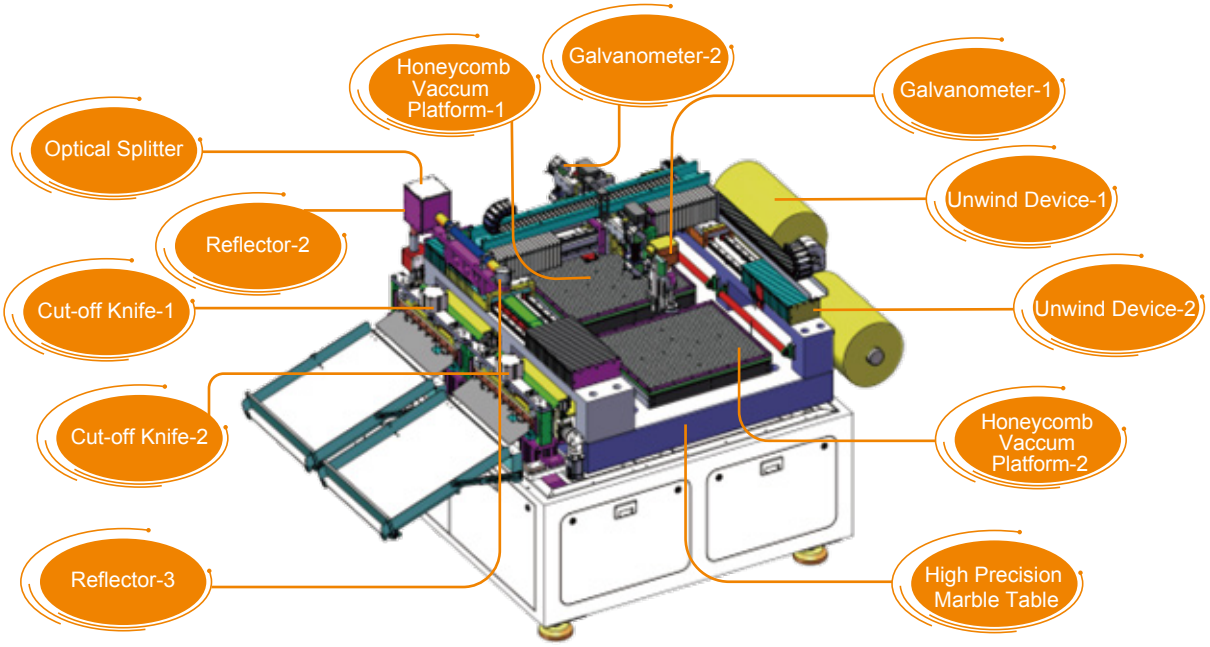
02 Double Working Tables

Equipped with double platforms working simultaneously, double efficiency.

03 High Accuracy / High Speed Cutting

Adopt high-performance laser, max. cutting speed 7000mm/s, higher cutting accuracy and speed.

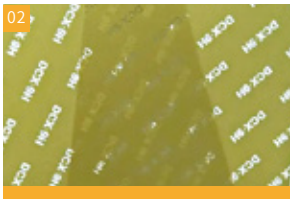
▸ Structure



▸ Application

Mainly used for cutting viariety of thin film, CVL roll to sheet, PET film, PI film, PP film, adhesive film, copper foil, explosion-proof film, electromagnetic film, SONY adhesive film, etc.

PI Film



Explosion-proof Film

CVL

Copper Foil Circuit

Carbon Fiber

Adhesive Film

Acoustic Film

Flexible Film

▸ Product Function And Features

01

Intelligent Cutting Mode

Ultra-long processing travel, "non-stop production mode " , "cyclic loading and unloading system" , "embedded intelligent cutting model".

02

Imported Laser Optoinal

Adopted with imported laser source, and optical element, fine laser spot , stable output power, low maintanance cost, higher efficiency.

03

Automatic Compensation

Automatic compensate for the size changing caused by material shrinkage or deformation.

04

Beam Split And Non-split Switchable

Split and non-split is switchable It can merge two beams into one single head to acheive higher power to process thicker materials.

▸ Parameter

Item	Specification
Applicable Products	CVL、FPC、RF、thin multilayer
Machine size	L1550 x W1650 x H1700(mm)
Net weight	2500kg
Max. processing size	600x500(mm)Dual platforms
Total process accuracy	±25μm
Repetitive positioning Accuracy of linear motor	±2μm
Positioning accuracy of linear motor	±3μm after compensation
Laser power	Pico UV:30W Pico green laser:30/60W
Galvanometer scan range	≤50x50mm
Laser pulse frequency	300-2000KHZ
Compensate for expansion and contraction	≦1‰
Stitching cutting function	Yes
Output pulse width	≤15ps

Item	Specification
Wavelength	Pico UV: 355nm Pico green laser: 532nm
Electric power supply	380V 50-60HZ / 9KW
Environmental temperature	23°C±2°C Non-condensing
Cutting line width	20±5μm
Cutting efficiency	800mm - 7000mm/s
Memory capacity	500G
Pipe dia. of air outlet	50mm
Air pressure	Pressure≥0.6MPa
Cooling way	Constant temperature chiller
CCD	2 Units
CCD scan range	4.6x3.2mm
CCD positioning accurancy	±5μm
Laser spots	10-25μm
Stitching accurancy	≤10μm
Stitching for long materials	Optional

Laser Marking Machine Series

Green Laser

01 Automatic Flip

02 Automatic Loading And Unloading

03 Maximum Board 750x750

（Marking Machine） Model: CY-MKPCB-7575

▸ Description

Special laser marking machine for PCB industry, which can realize full automation of loading, marking, turning, unloading, and connection production; ultra-large format processing of 750x750mm PCB boards, which can mark bar codes, QR codes, characters, graphics, etc.; Information such as raw material procurement, production process and technology, product batch, manufacturer, production date, product destination, etc. can be automatically generated into a QR code, which can be automatically marked on the PCB/FPCB surface by laser to achieve product traceability and management.

▸ Advantage

01 Automatic Flip

After marking one side, it can automaticlly flip, lift-type flipping components, 750x750mm large format flipping is easily completed, double-sided marking is done continuously.

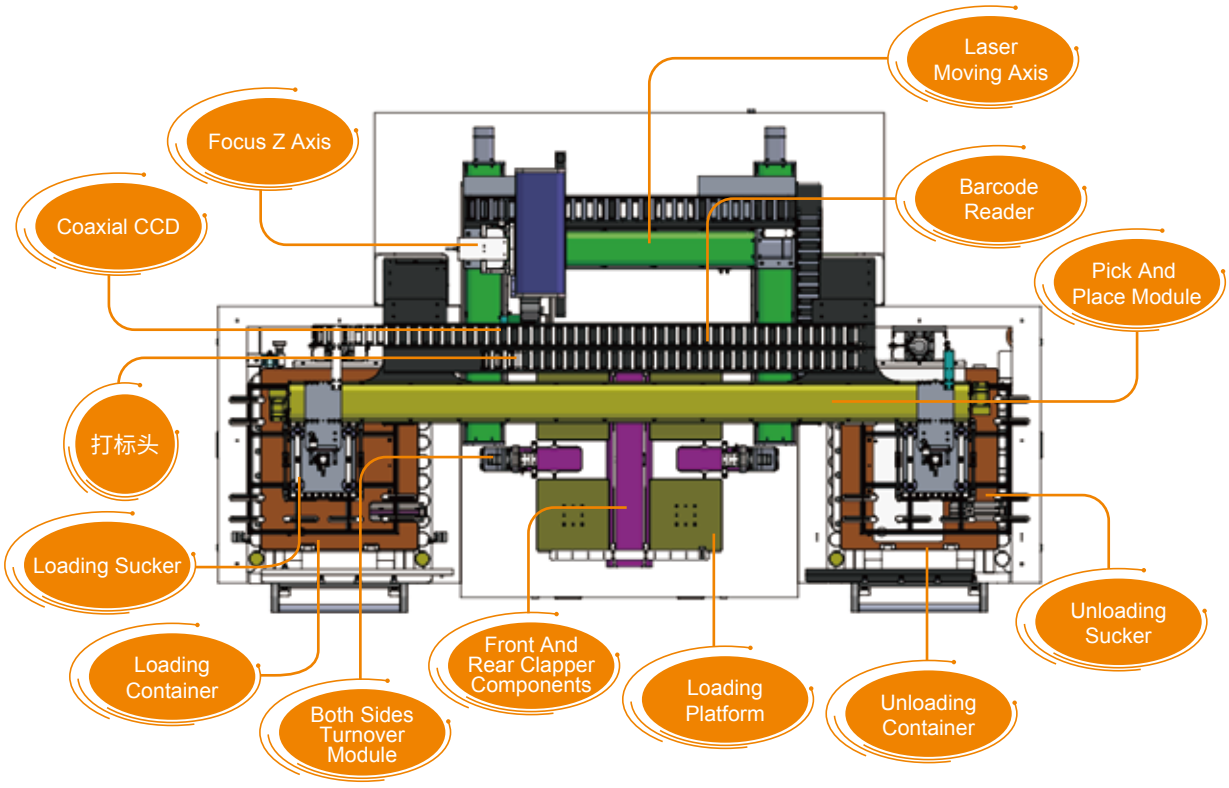
02 Automatic Loading And Unloading

The manipulator in the feeding area automatically adsorbs the PCB board, grabs and moves to worktable for automatically marking. After marking it will be automatically absorbed and move to the receiving area.

03 Precise CCD Positioning

It can automatically positioning the PCB effectively, tightly adsorb the PCB platform and improve the marking quality.

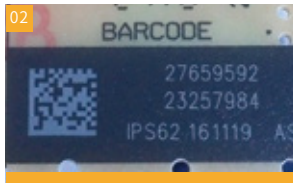
▸ Structure



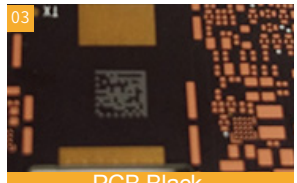
▸ Application

Mainly used in PCB, FPCB and other industries, it is mainly used to automatically mark two-dimensional code on the surface of PCB/FPCB,SMT(select the corresponding model according to different format). It can automatically mark two-dimensional code, one-dimensional code and characters on various inks such as white oil, green oil, black oil and copper, stainless steel, aluminum alloy and other surfaces.

PCB Red Oil Board Coding



PCB Blue Oil Board Coding

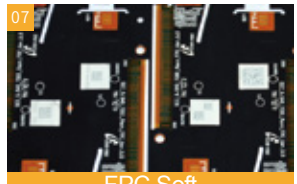


PCB Black Oil Board Coding

PCB Green Oil Board Coding

PCB Stainless Steel Sheet Coding

FPC Reinforced Steel Sheet Coding



FPC Soft Board Laser Coding

PCB Board Coding

▸ Product Function And Features

01 **Product Traceability**

Automatically mark on the PCB/ FPCB surface with laser to achieve product traceability and management.

02 **Automatic Marking**

Minimum processing capacity is 1.5x1.5mm, Processing accuracy is high, automatic mark and self-checking functions to achieve traceability.

03 **Good Compatibility**

Good compatibility, can be marked on the surface of various inks and copper clad laminates such as white oil,green oil, black oil.

04 **Badmark Recognition**

With badmark identification function,it can automatically identify “X” plate without engraving.

▸ Parameter

Item	Specification
Machine size	L3390 x W2160 x H1900(mm)
Repetitive positioning accuracy	±0.05mm
Total accuracy	±0.1mm
Field lens marking range	175x175(mm)
PCB processing range	≤750x750(mm)
Min processing character height	0.1-0.4mm depends on laser type
Marking speed	Linear marking speed 7000mm/s
Laser light source	Green light
Visual system	Industrial CCD positioning and code reading system
One-dimensional code type	Code 39,Code 25, Code 39, Code 128,EAN-13, EAN-8, LSBN,etc.
QR code type	Data matrix,QR Code, micro QR Code,PDF417, Code 49,Code 16K etc.
Machinable QR code size	≤2x2(mm)
Automatic positioning function	CCD Positioning，2 point、3 point，4 point positioning mode

Item	Specification
Average output power	10W
Processing board thickness	0.5-5(mm)
Coding ability	30 bit≧1.5x1.5mm
Power supply	380V/50Hz/8KVA
Air supply specifications	0.4-0.6MPa
Support file format	DXF、Excel、TXT
Environmental requirements	Temperature 18-25℃、Humidity＜50%
Automated customization function	Automatic flip
Automatic load and unload system	Hand push loading and unloading trolley
Workflow	Standard machine: left in and right out (flow direction can be changed as required)
Automatic code reading function	Automatically read the QR code and save the data
Character type	True Type、JSF、SHX、Bitmap font、DMF
Intelligent production function	Can be customized to connect with ERP /MES and other systems, automatically obtain work order number, product batch number, material code, product name and specifications, and automatically mark.

Laser Drilling Series

UV / PICO Laser

01 550*650mm Working Area

02 Precision Pulse
Digital Power Control

03 Automatic Visual System

Model: UV Laser Drilling Machine

▸ Description

Applicable for processing board with max. size 550×650mm, suitable for PTH, BVH and processing on FPCB board. Equipped with CCD for fiducial alignment, dynamic processing range, improve processing efficiency. With high resolution camera, precise focus on drilling position, high drilling speed, fine quality, high efficiency.

▸ Advantage

01 Easy Operation

Self-developed software, customized according to actual demand.

02 High Quality Laser System

High quality laser system, long lifetime; high quality servo motor and control system.

03 Automation System

With automatic power detecting and correction function, automatic measurement of material thickness, automatic achieving DOF.

▸ Product Function And Features

01 **Easy Operation**

Self-develped software, customized. Easy operation software interface, perfect human-computer interface.

02 **Powerful Function**

Timing detection function. Playback detection function after processing, preview function. Software with processing and fault log function.

03 **Automation System**

With automatic power reading and correction function, automatic measurement of material thickness, automatic achieving DOF.

04 **Effect Quality**

X.Y axis can reach 1200mm/sec for high precision and high speed drilling, perfect drilling effect.

05 **Precision Drilling**

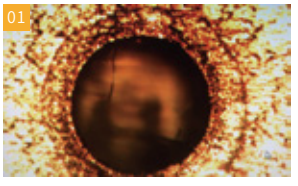
Using high energy laser beam for drilling, high accuracy, fine cutting edge, high excellent rate.

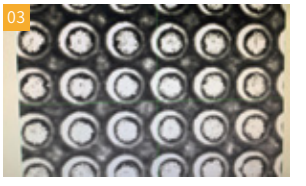
06 **Safety And Environmental**

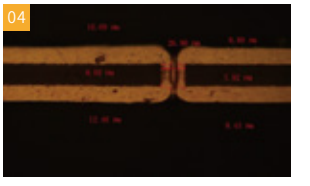
Non-touch processing, safety and enviromental, high processing efficiency, suitable for numerous group hole processing.

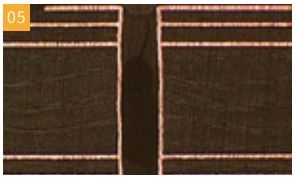
▸ Application

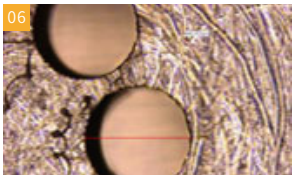
Apply for FPCB industry, suitable for FPCB PTH, BVH, drilling, laser drilling of single layer board, double layer assembly board, mutil layer board, etc.

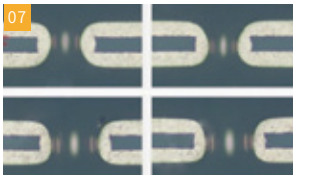


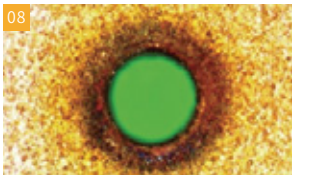












▸ Parameter

Item		Specification
Panel	Model	FPCB panel
	Max. Panel size	550 x 650（mm）
	Thickness	0.05t~4.0t
	Material fixing way	Vaccum table
Machine function	Position accuracy	≤10μm
	Function	PTH BVH CUTTING
	Correcting method	Optical point
Description	Processing method	SINGLE/ROLL TO ROLL
	Travel type	4-axis linkage
	Speed	600mm /s
	Laser power	12w
	Laser spot	20μm
Cutting range	X/Y axis	Linear motor
		Table travel speed: max 1200mm/sec
		Accuracy ±1.5μm
		repetitive positioning ±1μm
	Z axis	Servo motor: ball screw
		Table travel speed: max 150mm/sec
		Accuracy: ±10μm
		Repetitive positioning: ±5μm
	Worktable structure	Marble
	Panel fix	Vacuum

Item	Specification
Electric power supply	AC 380V
Air pressure	0.5~0.8 MPa
Laser type	UV
Average power	11W @ 40kHz
Pulse frequency	40-90 kHz optimized

Item	Specification
Mark point	2 or more
Mark size	0.08mm ~ 0.7mm
Hole diameter	≥50μm
Warming up	20min
Working area	550*650mm

4030CGM Medical Series

01 **400*300mm** working area

02 **3μm** Positioning accuracy

03 **5-20μm** Carbonization

Model: CY-CT1PZ1-4030/ CY-CT1PZ1-4030*2

▸Description

Suitable for ultra-precision cold cutting and drilling of PET material for medical devices.
Adopting femtosecond UV lasers, cold processing is carried out without thermal damage.
Marble base + linear motor platform, fully closed-loop grating control, stable and reliable.
Equipped with imported high-speed galvanometer, CCD vision positioning, intelligent dust extraction system, software hierarchical permission, Mark automatic detection and alarm, laser power online monitoring and compensation, the entire process is fully automated, highly efficient and stable, meeting the precision processing requirements of medical grade.

▸ Advantage

01 Better Effect Of Cutting Edge

Adopts femtosecond ultraviolet laser, combined with marble body, precision linear motor and full closed-loop grating control. The equipment has good rigidity, small thermal deformation, and stable and guaranteed positioning and repeatability accuracy.

02 Efficient and intelligent visual positioning

Equipped with high-definition and high-speed CCD and imported galvanometer.
It features fast response and high efficiency, meeting the requirements for batch precision processing.

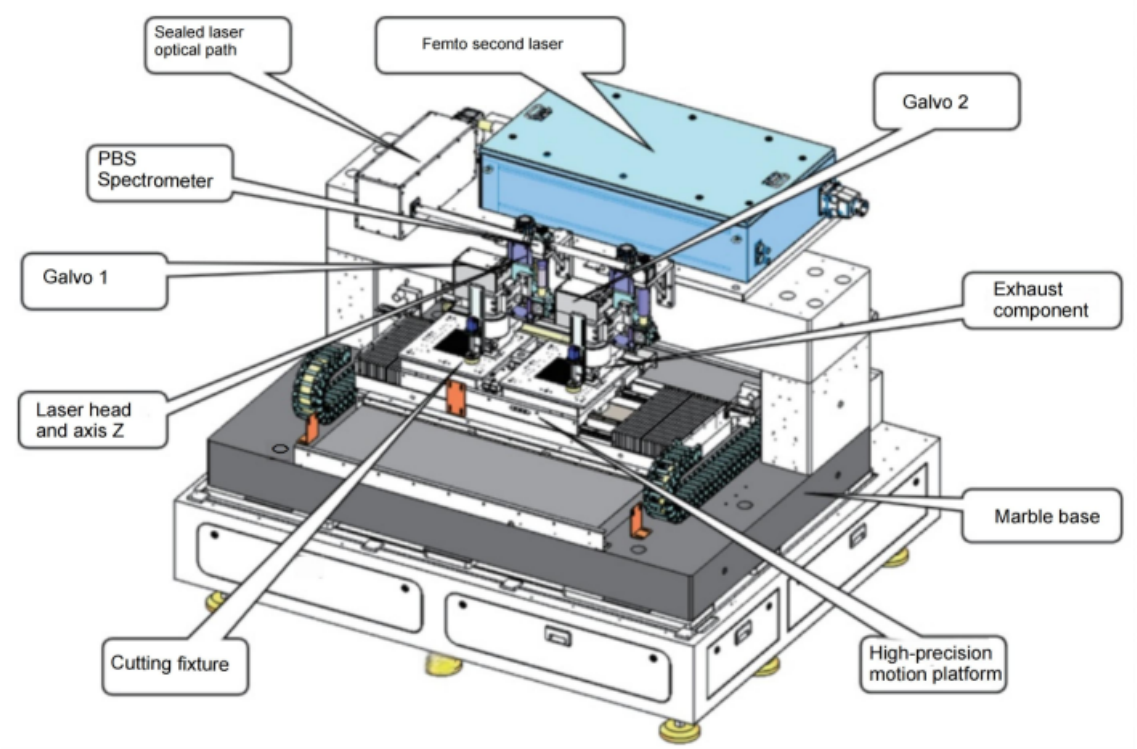
03 Clean, environmentally friendly and non-damaging

Equipped with deionized air knives and dust extraction systems, it prevents smoke and dust adhesion and material oxidation, ensuring clean processing and quality.

04 Intelligent power control, long-lasting operation

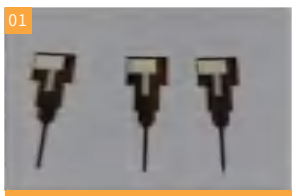
Supports automatic monitoring and compensation of laser power, with intelligent self-control, simple operation and long-term stable operation.

Structure



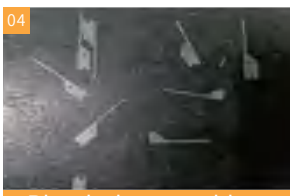
Application

Mainly used for cutting, drilling, engraving PET, PI, PVC film and pipe, ceramic, metal layer silver paste, medical in vitro and in vivo diagnostic materials electrode profile, blood oxygen and blood glucose sensor implants, coronary artery stent, skeleton, endoscopic instrument, metal foil, etc.

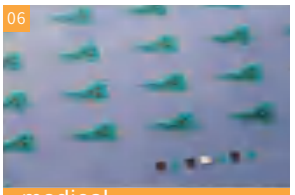

01 Implant Sensor Chip

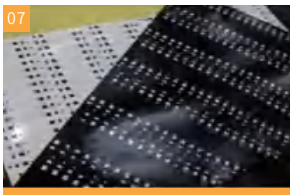

02 PET film


03 In Vivo Diagnostic Chip


04 Blood glucose chip


05 PET outline cutting


06 medical micro-instruments


07 PI film


08 FPC sensor cutting

▸ Product Function And Features

01

Cutting Quality

Fine cutting quality, smooth and clean cut edge, less deformation.

02

Laser Path

Fine design with high precision laser path, to guarantee the accuracy and speed.

03

CCD Positioning

CCD search fiducial mark for alignment, able to automatic recognize large or small mark point, smallest point can be <1 Pixel.

04

High Resolution

CCD light can be adjusted to take high resolution photo and acheive perfect positioning

▸ Parameter

Item	Specification
Applicable products	Medical chip, FPC profile, FPC auxiliary, PET, PI film,ceramic,cvl,etc.
Operation model	Single/Dual platform
Machine size	L2250 x W1950 x H1900(mm)
Net weight	4300kg
Working area	400x300mm
Total accuracy	±20μm
Linear motor repetitive positioning accuracy	±2μm
Linear motor positioning accuracy	±3μm
Stiching accuracy	±10μm
Laser power	30W
Galvanometer scan range	50x50mm
Compensate for expansion and contraction	≦1‰

Item	Specification
Output pulse width	pico≦15ps femto≦850fs
Cutting line width	20±5μm
Cutting efficiency	8 -10 pcs/min (Depend on materials and processing requirements)
CCD	1-2 unit
CCD positioning accuracy	±5μm
Laser spot	10-25μm
Memory capacity	500g
Diameter of air outlet	75mm
Air pressure	≥0.6Mpa
Cooling way	Constant-temperature chiller
Environmental temperature	18-26°C 45-65%RH
Ground pressure	600kg/m²
Electric power supply	12KW/380v 50-60HZ
Laser pulse frequency	300kHz-2MHz

Ceramic laser drilling Series

01 Green laser source

02 Imported high-precision galvo

03 Automatic loading and unloading

LTCC/High-frequency inductor laser drilling equipment Model: CY-PICODRILLING-7055

▸ Description

It adopts green picosecond laser and is equipped with imported high-speed galvanometer, ensuring efficient and stable processing. Fully automatic loading and unloading, with a double-sided motor platform featuring high precision and strong rigidity. Non-contact processing without stress deformation, and the software can be flexibly programmed for hole adjustment. The beam quality is excellent, with uniform aperture and smooth edges. High-pixel CCD vision automatic positioning and correction, supporting multi-mark target capture, and online monitoring and compensation of laser power.

▸ Advantage

01 Green pico laser source

It adopts a green picosecond laser and is equipped with a high-speed galvanometer, ensuring efficient and stable processing.

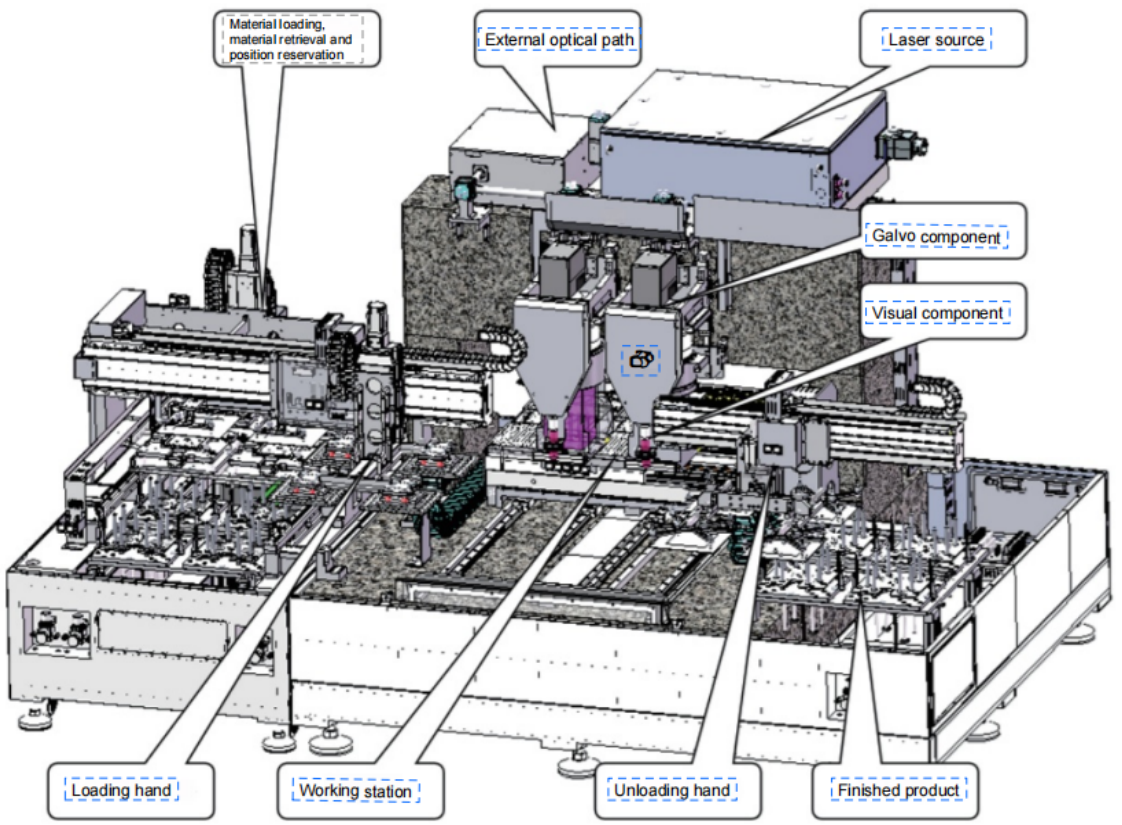
02 CCD Position

Optional CCD automatic positioning system is available to enhance production operation efficiency and achieve better, more accurate and faster product identification.

03 Cutting, drilling&scribing all in one

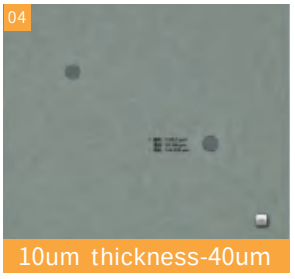
The cutting/drilling/scribing process of conventional ceramic film materials;
It can complete the processing of 6-inch (152.4mm) material sheets in one go without the need for splicing, achieving higher precision.
It can also perform secondary positioning, target grasping and drilling, with a precision of up to ± 5um.

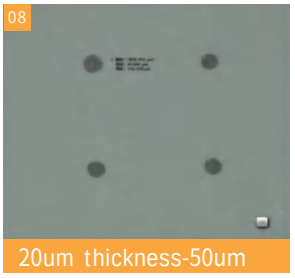
Structure



Application

It is mainly applied to drilling, scribing and cutting of ceramic films. It can be used in LTCC, HTCC and high-frequency inductor industries.





Feature

01 Effect

The beam quality is high, the focused spot is small, the power stability is strong, the aperture size is consistent, there is no chipping or cracking at the edge of the hole.

02 Green pico laser

It conducts a huge amount of energy to the workpiece in a short time, causing the material to melt, evaporate or even vaporize. The higher the pulse energy, the more material is melted and evaporated.

03 Automatic

Fully automatic loading and unloading save labor and improve the working efficiency of the equipment. It adopts a bilateral motor cross platform module design to increase stability and precision.

04 Good cutting conditions

Equipped with a high-pixel CCD camera and an automatic correction function, supports automatic CCD correction. It can perform 4-mark, target capture positioning or 16-mark target capture positioning as required.

Parameter

Item	Parameter
Materials	AlO, AlN, SiN,zirconia ceramics, LTCC, HTCC, ferrite and other membrane materials
Operation mode	Single/ dual laser head Single/ dual platforms
Machine size	L3650xW2100xH2300(mm) (For reference only)
Net Weight	7000kg
Moving area	850x450(mm)
Max process size	254x254(mm)
Linear repetitive positioning accuracy	±1μm
Linear repetitive accuracy	±0.5μm
Z axis accuracy	±0.01mm
Min. hole apeture	15um@10um film thickness
Hole taper	＞90%
Cutting thicknes	＜0.4mm
CCD position	Dual CCD vision automatic positioning, size compensation, field of view range 6*4mm

Item	Parameter
Laser wavelength	532nm
Laser frequency	600-1000K
Laser power	90/120W
Cooling way	Chiller
Pulse width	<12PS
Environmental temperature	23±3℃
Environmental humidity	40-60%RH (No-condensing)
File format	DXF
Input voltage	380V 50Hz
Machine power	20KW
Gas pressure	0.5-0.7MPA
CCD	1-2
CCD accuracy	±5μm
Drilling position accuracy	Aperture accuracy±3um, Splicing accuracy±5um

Laser Drilling Series

Single Laser Head / Dual Laser Heads:
Cutting, Drilling, Scribing, all-in-one

01 High Quality Fiber Laser And Cutting Head

02 Precision Linear Motor Cross Table

03 CCD Automatic Positioning System Optional

Ceramic Drilling Machines(Single / Dual)Model: CY-CT1FB1-2020 / CY-CT2FB2-2020

▸ Description

Fiber laser can cutting, drilling, scribing variety of ceramic and metal materials. Machine equipped with precision linear motor cross table, optional CCD automatic positioning system, good cutting quality, high efficiency, ensure the reliability and stability.

▸ Advantage

01 High Quality Fiber Laser

Adopt high performance fiber laser, good laser spot quality, stable output power, long lifetime.

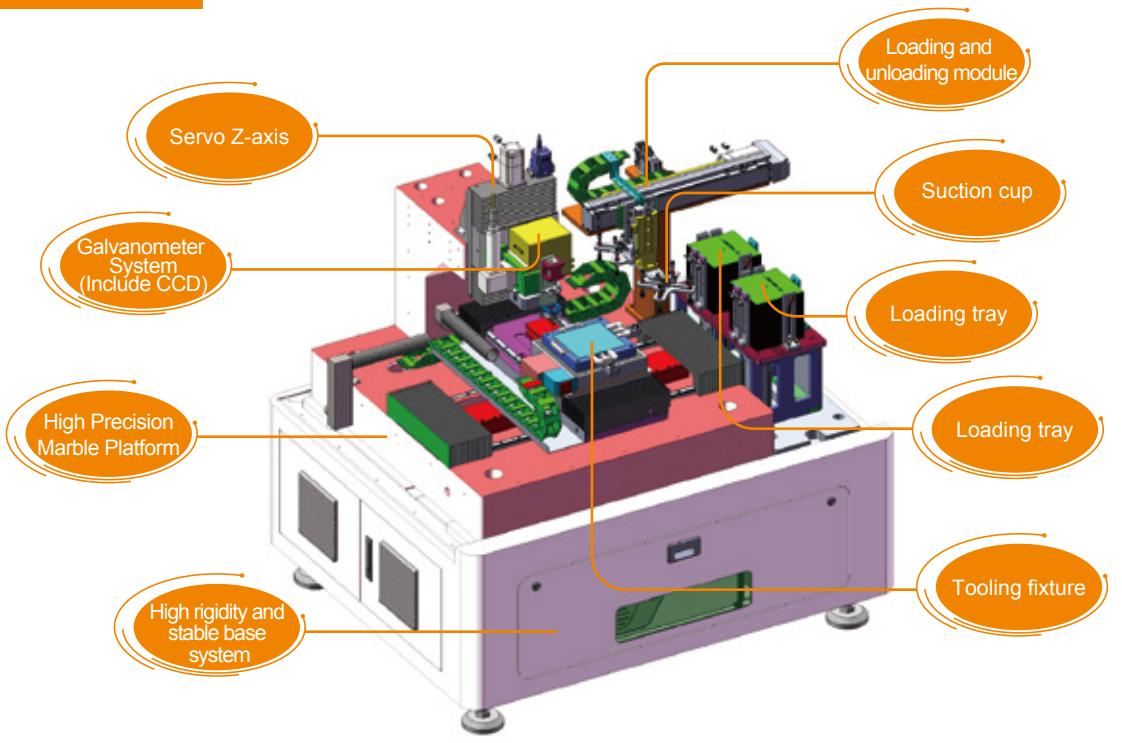
02 CCD Automatic Positioning

CCD automatic positioning be optional, can achieve better, higher accuracy and faster identification, and improve the production efficiency.

03 Cutting, Drilling, Scribing, All-in-one

Cutting, drilling, scribing, all-in-one, can achieve cutting variety of ceramic and metal materials.

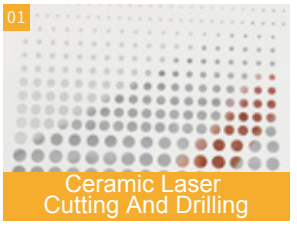
▸ Structure

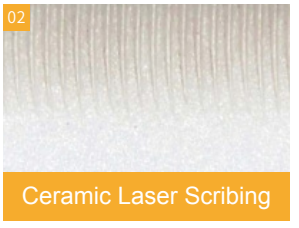


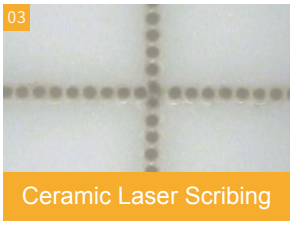
Ceramic Fiber Laser Cutting Drilling Machine(Dual Heads)

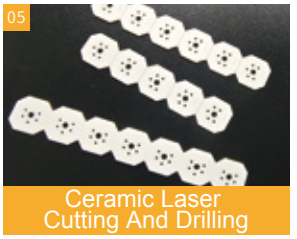
▸ Application

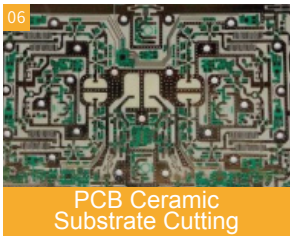
Suitable for laser cutting and scribing of <1mm thickness alumina, zirconium oxide, aluminum nitride, silicon nitride and other ceramic materials, laser micro drilling thin ceramic.

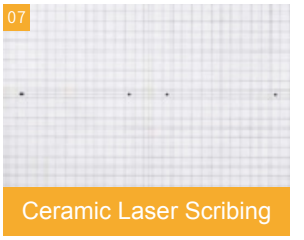












Product Function And Features

01

Effect Quality

Single head / Dual heads model, cutting, drilling, scribing in one, can process variety of ceramic and metal materials, high cost effective.

02

Fiber Laser

Good laser spot, high energy density, high cutting speed, edge be smooth and clean, no burr.

03

Automation

No contact between the cutting torch and workpiece during processing, no tool wear, fully automatic control, saving labor cost.

04

Good Cutting Environment

No strong radiation, noise and environmental pollution during cutting, creat a good working environment for the operator's health.

Parameter

Item	Specification
Applicable products	Alumina, aluminum nitride, silicon nitride, zirconium oxide ceramics and sapphire
Operation module	Single/dual laser head, single/dual work station
Machine size	L1450 x W1250 x H1750(mm)
Net weight	3000kg
Platform moving range	450x350(mm)
Maximum processing size	200x200(mm)
Linear motor positioning accuracy	±2μm
Linear motor repetitive positioning accuracy	±1μm
Z-axis repeated positioning accuracy	±0.01mm
Minimum processing aperture	φ0.05mm
Hole taper	≤0.01mm

Item	Specification
Wavelength	1070nm
Laser frequency	1Hz-10KHz
Laser power	1000W
Colling way	Chiller
Photoelectric conversion rate	30%
Environment temperature	23±3°C
Environmental humidity	40-60%RH
Compatible file format	DXF
Input voltage	380V 50Hz
Machine power	8KW
Process gas pressure	0.8-1.5MPa
CCD	1/2
CCD positioning accuracy	±5μm
Drilling position accuracy	± 10μm
Cutting thickness	≤1mm
Z-axis travel	100mm

Thickness Laser Measurement Series

（PCB Thickness laser measurement machine）Model: CY-FBPCB-4030T

▸ Description

This equipment can be used for area detection within 410x310 mm, with a plate thickness of about 1.0-6.0mm. It can automatically detect online, automatically determine and sort out defective products, automatically save detection data and implement CPK analysis to ensure that data is not lost, quality is guaranteed, non-contact detection, avoid scratches on the board surface, and almost no visible consumable loss.

▸ Advantage

01 Fast Measurement Speed

The dual measuring heads work independently and share the structure mode of loading and unloading to maximize the effectiveness of the measuring heads and improve work efficiency.

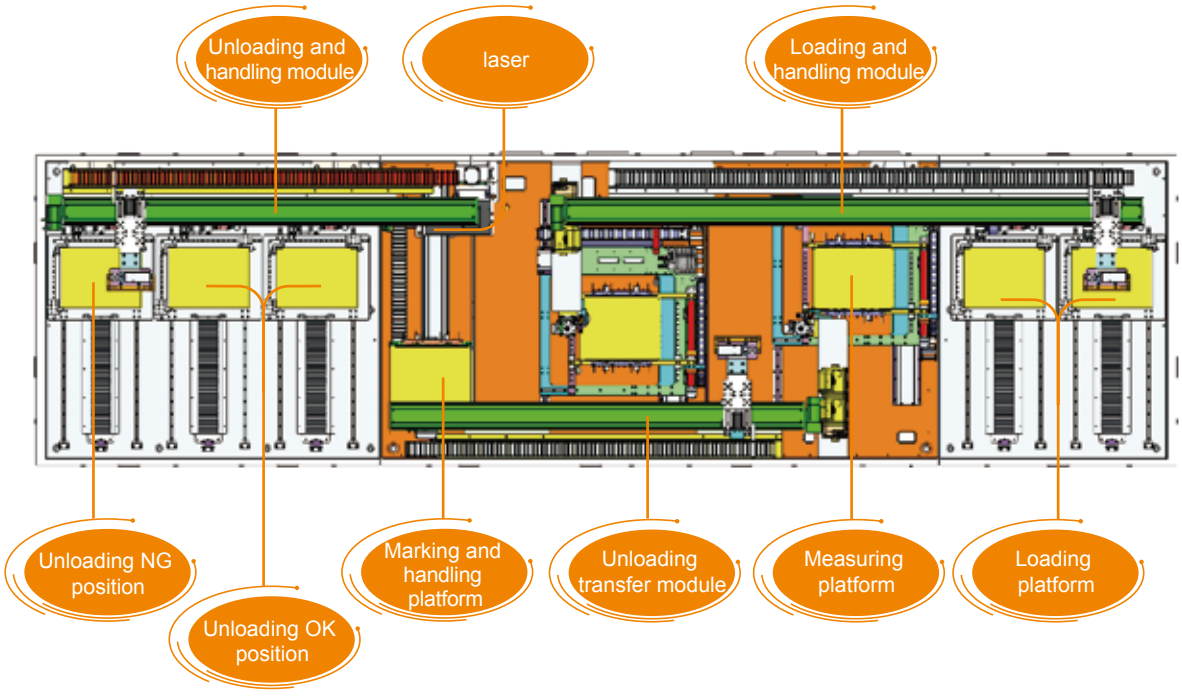
02 Real-time Data Tracing

Qualified products or defective products are laser-marked with QR codes, and the measurement data is uploaded in real time to facilitate process data tracing.

03 Fully Automatic

Using non-contact, measuring according to customer-supplied coordinates, avoiding scratches on the board surface, automatic online detection, and automatic determination and sorting out defective products.

▸ Structure



▸ Application

It can be applied to measuring various materials such as rigid-flexible boards, semi-rigid-flexible boards, hard boards, HDI, ceramic boards, glass, metals, die-cut films, etc., and is the best solution for the detection and classification of PCB substrates of various thicknesses.


01 Printed Circuit Board

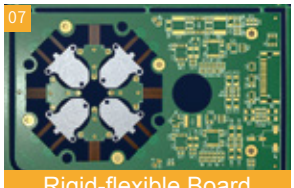

02 Connector Terminal

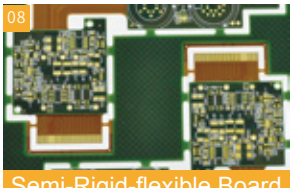

03 Lithium Battery Electrode Thickness


04 Silicon Wafer


05 Glass


06 Coating Material Thickness


07 Rigid-flexible Board Thickness Measurement


08 Semi-Rigid-flexible Board Thickness Measurement

▸ Product Function And Features

01

Easy To Operate

Configure permission management function, user-friendly software interface, easy to use, improve work efficiency.

02

Best Measurement Data System

High-precision optical measurement system, high efficiency and high precision at the same time.

03

Fully Automatic Detection

Online automatic detection, automatic judgment and sorting out of defective products.

04

Real-time Monitoring

Real-time monitoring of all actions, signals, and hardware status, convenient for production progress control and quality data analysis.

▸ Parameter

Item	Specification
Machine size	L5600 x W1520 x H1850（mm）
Working direction	Facing the operating surface from right to left
Production board size	MIN:100x100(mm) MAX:410x310(mm)
Production board thickness	MIN:1.0mm MAX:6.0mm
Excess thickness range	0.1-2(mm)
Measurement accuracy	±2μm
Production capacity	30S/SET
Working mode	Two sets of measuring heads work alone
Marking function	Laser coding
Number of thickness measuring heads	2 Sets
Reference distance	30mm

Item	Specification
Maximum detection area	410 x 310 (mm)
Production board thickness	Up and down shooting (2 groups)
Weight	3000 kg
Laser power	5W
Laser wavelength	355nm
Cooling method	Air cooling
Measurement data CPK calculation	With
QR code reading function	With
Loading and unloading method	Adsorption loading and unloading
Loading position	Two places
Unloading position	Three places

Laser X-marking Series For Carrier Board

01 High-resolution 2D Code Scanning

02 Self-developed Visual Software

03 Real-time Coding And Reading

(Laser X-printing Machine For Board Detection)Model: CY-MKPCB-7575

▸ Description

Self-developed visual software, the entire interface operation process is simple and easy to understand, and the fast reading meets the needs of the site. It uses imported water-cooled lasers, which are more stable, and high-resolution 2D code scanning can be used for real-time coding and reading.

▸ Advantage

01 Precise CCD Positioning

Using imported high-definition and high-speed cameras to ensure the image acquisition effect, high-resolution 2D code scanning, real-time coding and reading, and precise positioning and processing.

02 Self-developed Visual Software

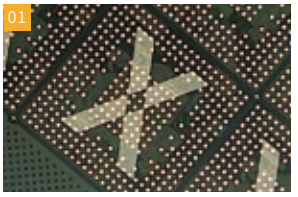
Completely independently developed, customizable operation interface, the entire interface operation process is simple and easy to understand and fast reading.

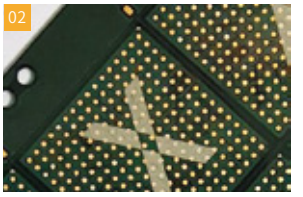
03 Imported Water-cooled Laser

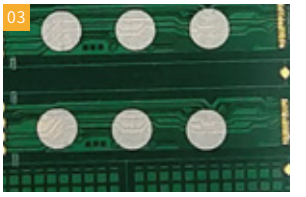
The imported laser is more stable, and the optical focus can be adjusted according to different materials. The beam quality is high, the focus spot is small, the power distribution is uniform, and the thermal effect is small.

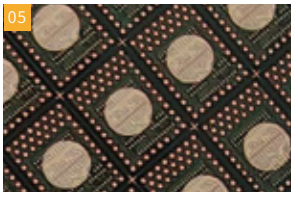
▸ Application

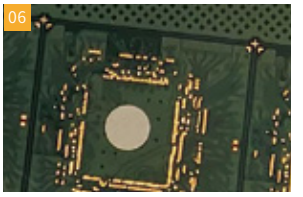
It is suitable for marking abnormal particles in finished products in the PCB industry. A special mark is placed at a specific position of the plastic-sealed UNIT to identify the defective particles, which is convenient for subsequent classification and customer identification.

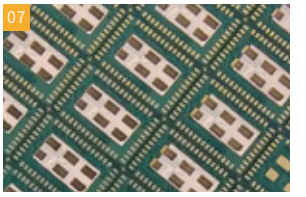


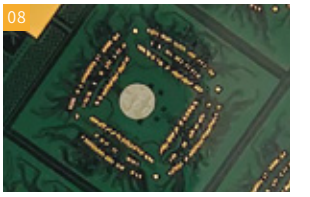












▸ Parameter

Item	Specification
Undistorted engraving area	160×160(mm)
Line width	0.04～0.08(mm)
Minimum character height	0.35mm
Printing depth	0.005～0.035(mm)
Laser repeatability printing accuracy	±0.005mm
Seal array accuracy	＜±0.025mm
Laser light source	Green Laser
Environmental temperature	20°C～25°C
Environmental humidity	40%～60%
Power supply	AC380V 50Hz
Power	15KW
Compressed air	0.6～0.8MPa
Dust extraction	φ75mm interface
Vibration source	VC-B

Item	Specification
Camera pixel accuracy	8μm
Light source type	Red and blue dual-color light source
Field of view	120mm
Camera type	16K line scan camera
Photographing method	Motion photography
Adsorption method	Vacuum adsorption + clamping
Transportation method	Linear motor X-axis / lifting Z-axis collaborative work
Fixed/working method	Top fixed/dual vision collaborative work
Dust collection method	External negative pressure dust collection control
X1, X2 travel	1160mm
X1, X2 axis maximum acceleration	1G
Z1,Z2 axis lifting range	0~50mm
Z1, Z2 axis repeated positioning accuracy	±10μm
Environmental smoke	Class6 (ISO) above

CUSTOMER SITE

Home Service Global Logistics

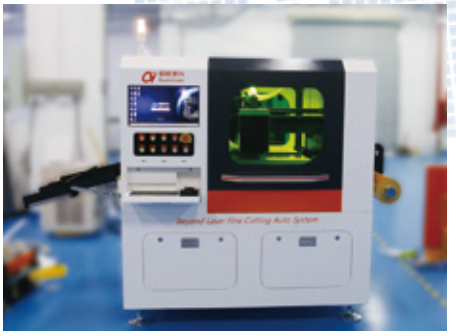
Equipment requirements collection, application sample testing, application program design, evaluation test landing, free warranty, Hardware maintenance, video tutorials, factory direct supply, on-site service, global logistics.

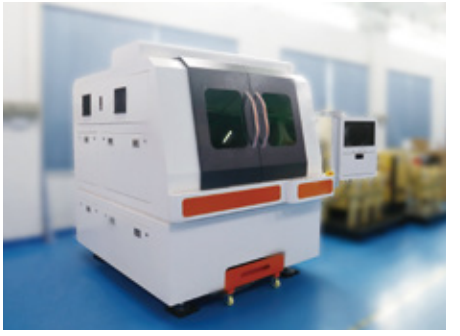
Operation Training

Factory Direct Supply

The Project Design

Hardware Maintenance





SERVICE POLICY

Pre-sale service

Through the Internet, telephone, door-to-door and other ways to provide customers with professional consulting solutions and laser application solutions. At the same time, we also provide customers with free sample testing service.

Requirements collection | Sample testing | Solution design | Evaluation test landing

On-sales service

We will treat every customer with integrity and fairness.

After-sales service

We will be responsible for the equipment you purchase, providing after-sales service, training, maintenance and other technical support.