

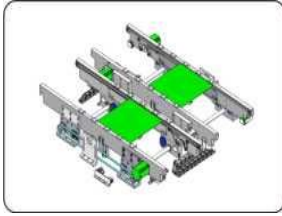
Laser Marking System



苏州宇顺力电子有限公司
YUSH Electronic Technology Co., Ltd



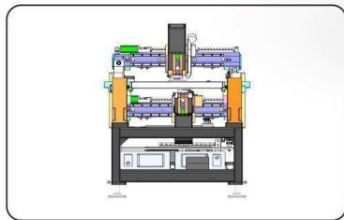
Function Configuration



Double track carving

Directly connected to the placement machine dual track (686mm track width)

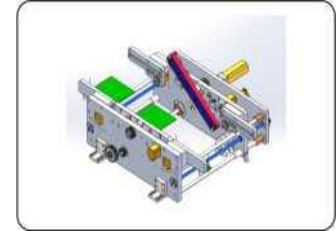
- Independent marking mode: simultaneous marking of AB two tracks and different models
- Independent transmission board, transmission time is 0



Double-sided marking on upper and lower heads

Simultaneous marking on side A and side B

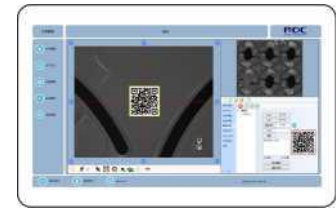
Efficiency increased by 100%



- Built-in flap

•Double-sided coding, flipping the front and back,

•Reduce transmission time and increase efficiency by 30%



Minimal software operation interface

- YSL independent research and development
- step by step program editing steps
- One-click point setting
- Multi-module custom barcode editing rules

Product Features

业界最小点径：0.11mm
Industry minimum size: 0.11mm

智能化 防呆防重雕
Intelligent Poka-yoke and defense anti-repeated carving

定制化激光追溯系统
Customized laser traceability system

业界最高镭射稳定度：
Highest laser stability in the industry
输出功率波动率 < 1%
Output power volatility rate < 1%

定制化MES系统对接
Customized MES system docking

读取率 100%
Read rate 100%

高精度视觉定位
High - precision vision positioning
重复刻印精度：±25μm
Repeat engraving precision : ±25μm

全功能激光模块化设计
Fully functional laser modular design

高精度视觉检测系统
High precision vision inspection system



Application Solutions



Online

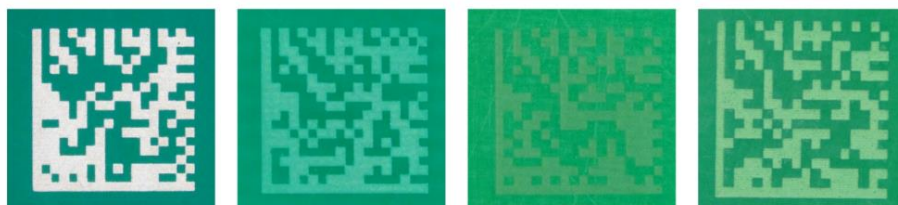
Can be placed at the forefront of the production line. After the incoming mark is completed, it flows into the production line for follow-up operations, MES interconnection, intelligent traceability!

Application scenario

Coding effect

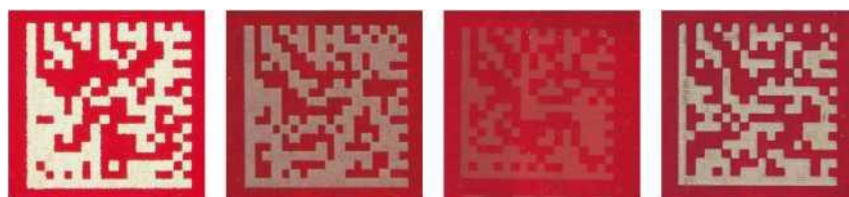
Recommended models

Green ink



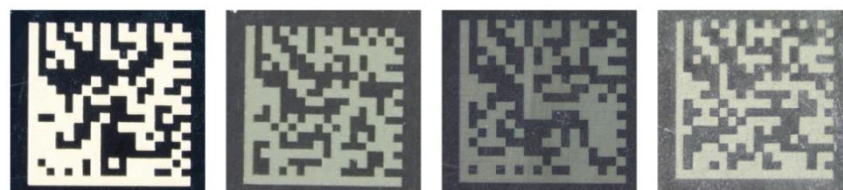
YS450C/A/P
S450G

Red ink



YS450C/A/P
S450G

Black ink



YS450C/A/P
S450G



离线式 配合上下料机构离线作业

Application scenario

Coding effect

Recommended models

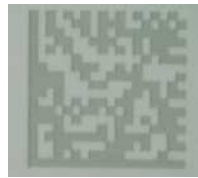
CO₂

GR

UV

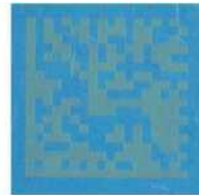
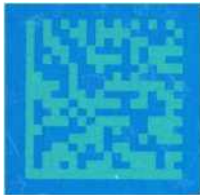
Fiber

White ink



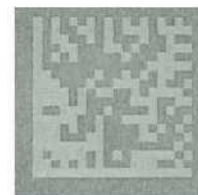
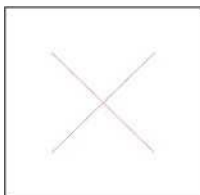
YS450C/A/P
YS450G
YS450F
YS450U

Blue ink



YS450C/A/P
YS450G

FPC steel sheet



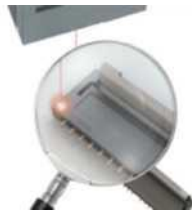
YS300U/SP80
YS450G

Process Comparison

As a modern precision processing method, laser marking technology has unparalleled advantages compared with traditional processing methods such as machine labeling, manual labeling, coding and printing:

1. The laser is used as a processing method, and there is no processing force between the marking parts, and it has the advantage of no contact, which ensures no deformation and damage of the PCB or components. At the same time, it has wide adaptability to materials, can make very fine marks on the surface of a variety of materials, and has very good durability;
2. The laser has good spatial control and time control, and has great freedom in the material, shape, size and processing environment of the marking object. It is especially suitable for automatic marking and special surface marking. And the processing method is flexible, which can not only meet the needs of laboratory-style single-item design, but also meet the requirements of industrialized mass production;
3. The laser marking is fine, and the lines can reach the order of millimeters to micrometers. The imitation and modification of marks made by laser marking technology are very difficult, which is extremely important for product anti-counterfeiting;
4. The combination of laser processing system and FA industrial control technology can form high-efficiency automatic processing equipment, which can print various words, symbols and patterns, easy to use software to design marking patterns, change marking content, and adapt to the high-efficiency and fast-paced requirements of modern production ;
5. Compared with traditional labeling/coding, laser processing has no pollution sources/consumables, and it is a clean and pollution-free high environmental protection processing technology;

	Labeling	Coding	Laser engraving	
line	Millimeter	Millimeter	Micron level (minimum 40um)	Fine lines 25 Times
Minimal font	2mm	2mm	100um	Minimal font 20 Times
Minimum QR code	5*5mm	4*4mm	1*1mm	Save area 5 times
Requirements for PCB board space	Need enough space	Need enough space	Anywhere	
Consumables	Yes (high cost)	Yes (high cost)	none	Environmentally friendly and no consumables Yes
Firmness	Easy to fall off and damage	Easy to fall off and damage	Engraved on the surface, never lost	Anti-counterfeiting, and permanent Excellent



Non-contact, no deformation Yes
 Various surface marking OK

(Specification

Model	YS250 系列	YS300 系列	YS400 系列	YS450 系列	YS600 系列
Laser Type	CO2/GR/UV/Fiber				
Repeat Positioning Accuracy	±25 μm				
Positioning System	CCD + MARK Positioning				
/Barcode Detection	CCD Online Detection				
Maximum PCB Size	250mmX250mm	200mm X200mm	400mmX300mm	450mm X400mm	600mmX600mm
PCB Thickness	0.5mm-5mm				
PCB Pass Height	UP:25mm DOWN:25mm				
The Thin Plate Anti-Warp System	Support (Upper and Lower Splint)				
Direction of Track Transmission	L-R / R-L / L-L				
Track Width Adjustment	Automaticity				
Double Side Engraving	Upper and lower Laser Engraving at the same time	Mono rail	Monorail	Monorail/Buil-in Rollover/Double-Sided Radium Carving	Monorail
Engraving object*Type	Character	English Uppercase x English lowercase x Figure x Katakana、Chinese Characters			
	Barcode	Symbol、User Save Text (Up to 50 Types)			
	QR code	CODE39、CODE128、ITF、NW-7、JAN(EAN)/UPC			
	Graphic Data	QR Code x Micro QR Code、IQR Code s Data Matrix、GS1 Data Matrix			
Smoke Treatment Mode	Automatic Smoke Purification System				
Software					
Software Interface	Chinese and English optimization interface				
Poka-yoke Function	Automatic identification of PCB reverse/reverse/wrong materials				
Selective Printing	Identify BAD MARK, do not perform well, automatically skip				
Barcode data source	SHOPFLOW, MES, IMS, PMS, Database, U disk, local setting bar code principle, number, time serial number				
	SHOPFLOW, MES, IMS, PMS, Database, USB flash disk, This machine sets the barcode rules figure, Time serial number				
/System Connection Function	Can connect SHOPFLOW, MES, IMS, PMS and other management systems				
Database	Each Model can be archived, directly tuned when generated again				
Engraving Angle	0-360°				
Others					
Input Voltage	AC220V 50/60HZ				
Pneumatic Supply	>0.5MPa				
Environmental Requirement	5°~40° C, 30%~80RH				
Size of the machine (Long*Width*Height)	760*1550*1600mm	680*1500*1550mm	850*1410*1450mm	1000*1550*1600mm	1070*1780*1500mm
	(L/W/H)	(L/W/H)	(L/W/H)	(L/W/H)	(L/W/H)
Equipment Weight	800KG	550KG	680KG	700KG/850KG/1000KG	950KG
Laser Specification	CO2	Fiber	UV	GR	MOPA
Laser Wavelength	10.6nm	1064nm	355nm	532nm	1064nm
Laser Power	5W/10W	20W/30W/50W	3W/5W/12W	7W/10W	20W/30W/50W
Laser Cooling Method	Air cooling	Air cooling	Water-Cooling	Water-Cooling	Air cooling
Laser Level	Class4				
Spot Size	CO2: 0.11mm / Fiber: 0.07mm / UV: 0.04mm / GR: 0.06mm				
Way to work	Laser Move	Laser Immobilization	Laser Move	Laser Move	Laser Move
Laser Irradiation Range	CO2: 50mmX50mm / Fiber: 150mm X 150mm / UV: 200mm X 200mm / GR: 200mm X 200mm				

Customer



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