

CO₂ Flying

Laser Marking Machine

DLM-CA

Laser Power:

30W / 40W / 60W / 100W (Optional)

Marking Range:

110*110 / 140*140 / 175*175 /
210*210 / 250*250 / 300*300mm
(Optional)



Machine Introduce

The DLM-CA carbon dioxide flying laser marking machine is equipped with a flying floor-standing column, which saves space. The working position of the laser head can be adjusted by moving the X-axis and Y-axis. Combined with the flying marking control system and assembly line, it can achieve batch and high-speed production marking.

High-quality marking effect: The laser beam generated by a carbon dioxide laser possesses strong energy, enabling deeper marking depths and clear marking effects.

High Speed: CO₂ laser marking machine has a high marking speed and is suitable for mass production.

Common Material Range:

Metal—Because CO₂ does not react with metal, it is often used to remove metal surface paint layer, spraying and other field;

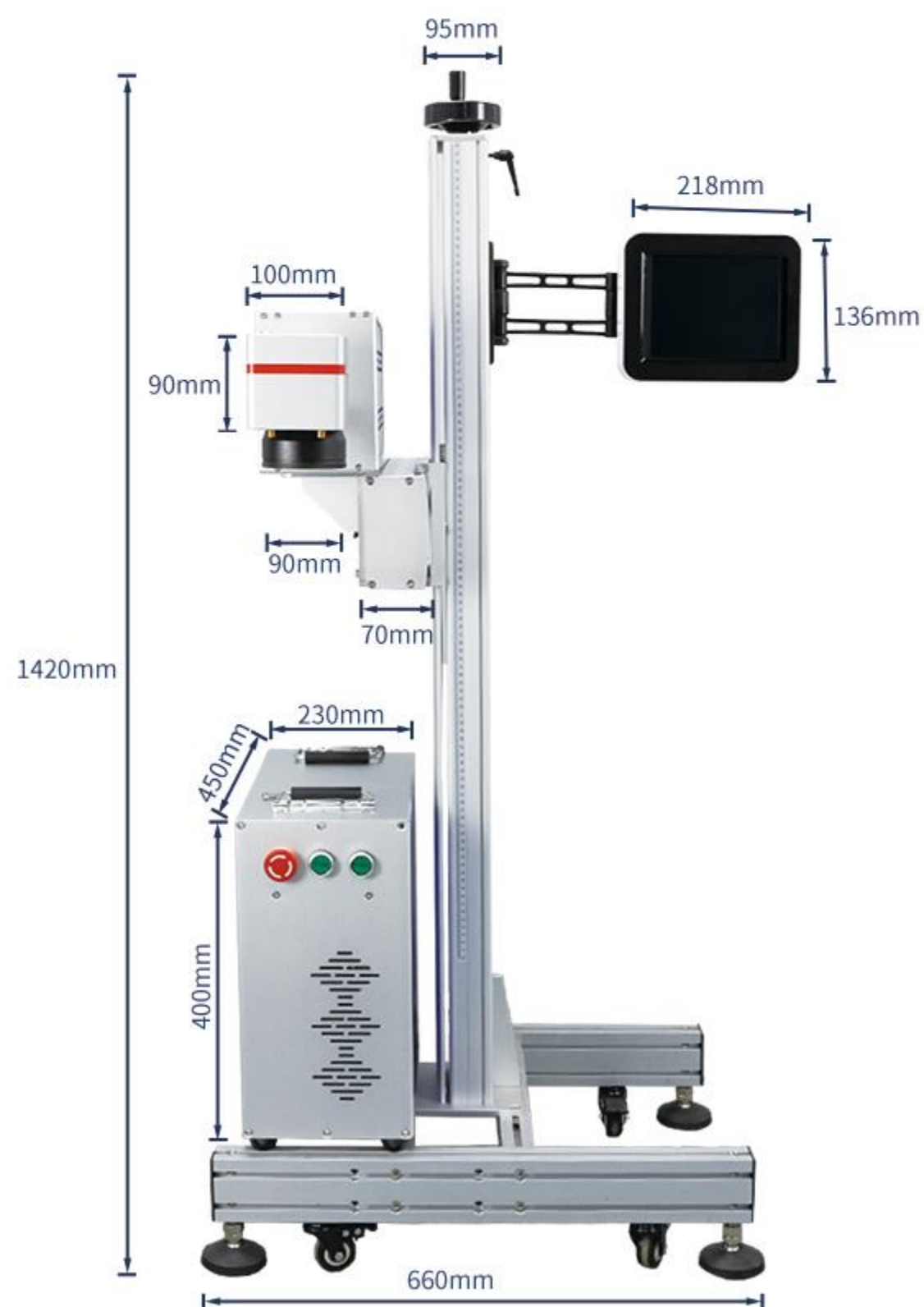
Non Metal—Materials such as wood, bamboo, paper, leather, fabric, rubber, PET, nylon, glass, ceramics, jade, acrylic, etc;

Other—The production date, code, serial number and other contents on the surface of bottled, paper and plastic packaging are rapidly marked.

Application areas:

It is widely applied to products in industries such as wood products, bamboo products, clothing packaging, footwear, packaging bags, films, food cans, glass bottles, beverage bottles, cables, pipes, electronic components, etc., as well as for marking various product numbers, barcodes, QR codes, trademarks, patterns and other information.

Machine Size



Machine Front



Machine Side

(The angle and position of the laser head can be adjusted.)



Component Introduction

Model	DLM-CA
Machine Size	510*660*1420mm
Machine Weight	55.7kg
Packing Size	650*910*1690mm
Packing Weight	118kg

Flying Series

CO₂ Flying Laser Marking Machine

Flying laser marking machine is a device specifically designed for high-speed, non-contact marking on assembly lines. Its body can be flexibly installed and used in conjunction with production lines, and the rack can be adjusted by moving up and down, left and right. The marking head can be rotated and adjusted according to production needs. Using online high-speed non-stop laser marking, combined with a high-speed galvanometer system, the production efficiency is extremely high, and it can work in both static and high-speed flow states on the production line.

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Parameter Information

Model	DLM-CA						
Laser Parameter	Laser wavelength	10.6um					
	Output power	30W	40W		60W		100W
	Beam size	1.8±0.2mm					2.5±0.2mm
	Repetition frequency	0~25kHz					
	Power adjustable range	10~100%					
Galvanometer	Marking speed	7000mm/s					
	Marking depth	≤2mm （View materials）					
	Repeatability accuracy	0.01mm					
	Min line width	0.1mm @ F=150mm （View materials）					
	Min character	0.4mm @ F=150mm					
Field Lens	Focal length	F=150mm	F=200mm	F=250mm	F=300mm	F=360mm	F=420mm
	Marking range	110*110mm	140*140mm	175*175mm	210*210mm	250*250mm	300*300mm
Control System	Control system	BSL / JCZ-LV7					
	Software language	CN/EN/DE/FR/ES/TC/JA/KOR etc.					
	Support system	High-speed control system / Windows					
	Support file format	PLT/DXF/AI/SVG JPG/GIF/BMP/PNG etc.					
Other	Cooling method	Air cooling					
	Power supply	110V-220V 50HZ-60HZ					
	Power consumption	≤0.55kW·h					

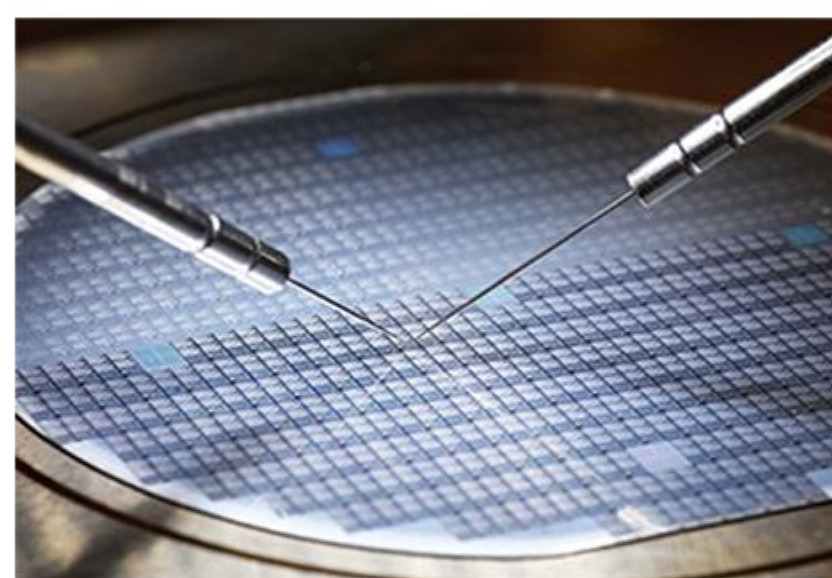
Application Scenarios



● 3C Electronics Industry



● IC Industry



● Semiconductor Industry



● Automotive Industry



● Packing Industry



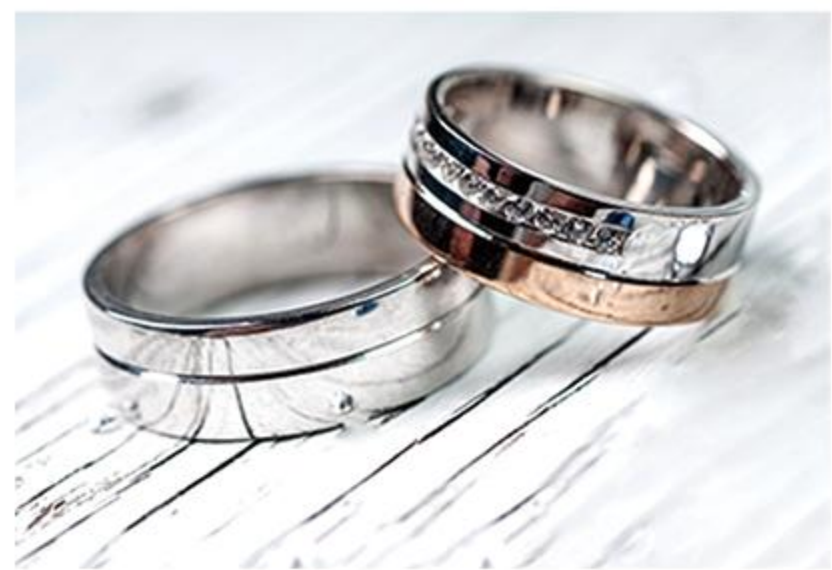
● Kitchen and Bath Industry



● Building Materials Industry



● Medical Industry



● Jewellery Industry

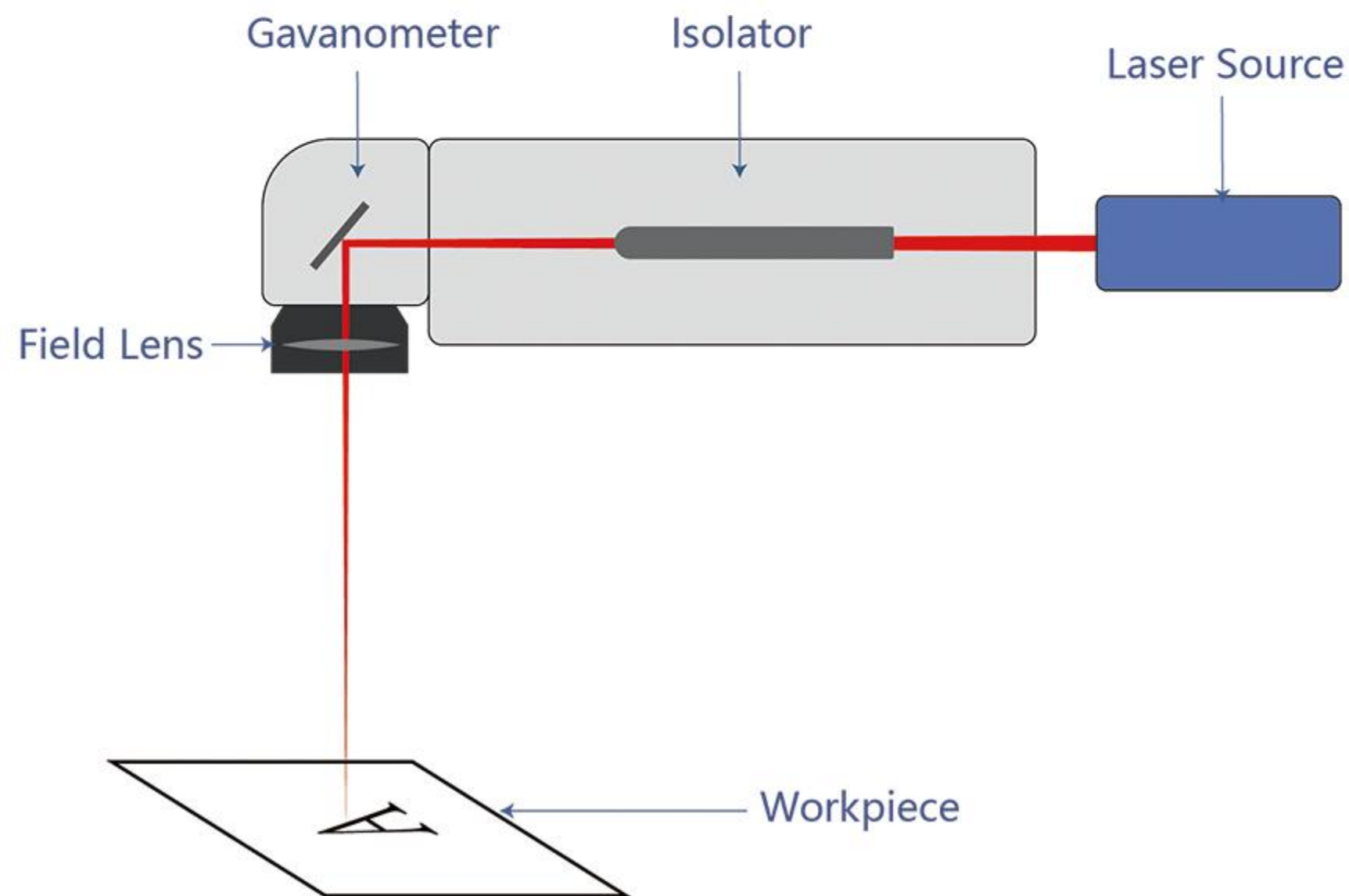
Sample



Core Component

Laser Source

The carbon dioxide laser marking machine generates an infrared laser beam of a certain wavelength through a carbon dioxide laser. The laser beam is focused on the surface of the object to be marked by a galvanometer scanning system, causing physical or chemical changes in the material and thus forming a permanent mark.



Common Brand



● CRD Laser



● DAVI Laser

Galvanometer

After computer sends instructions, the control card drives the high-speed deflection of the galvanometer, thereby changing the angle of the lens. The fixed laser beam is continuously reflected by the lens and finally focused by the field lens to form a controllable motion spot on the surface of the workpiece, which is combined into the desired pattern.



● Ordinary (Standard)



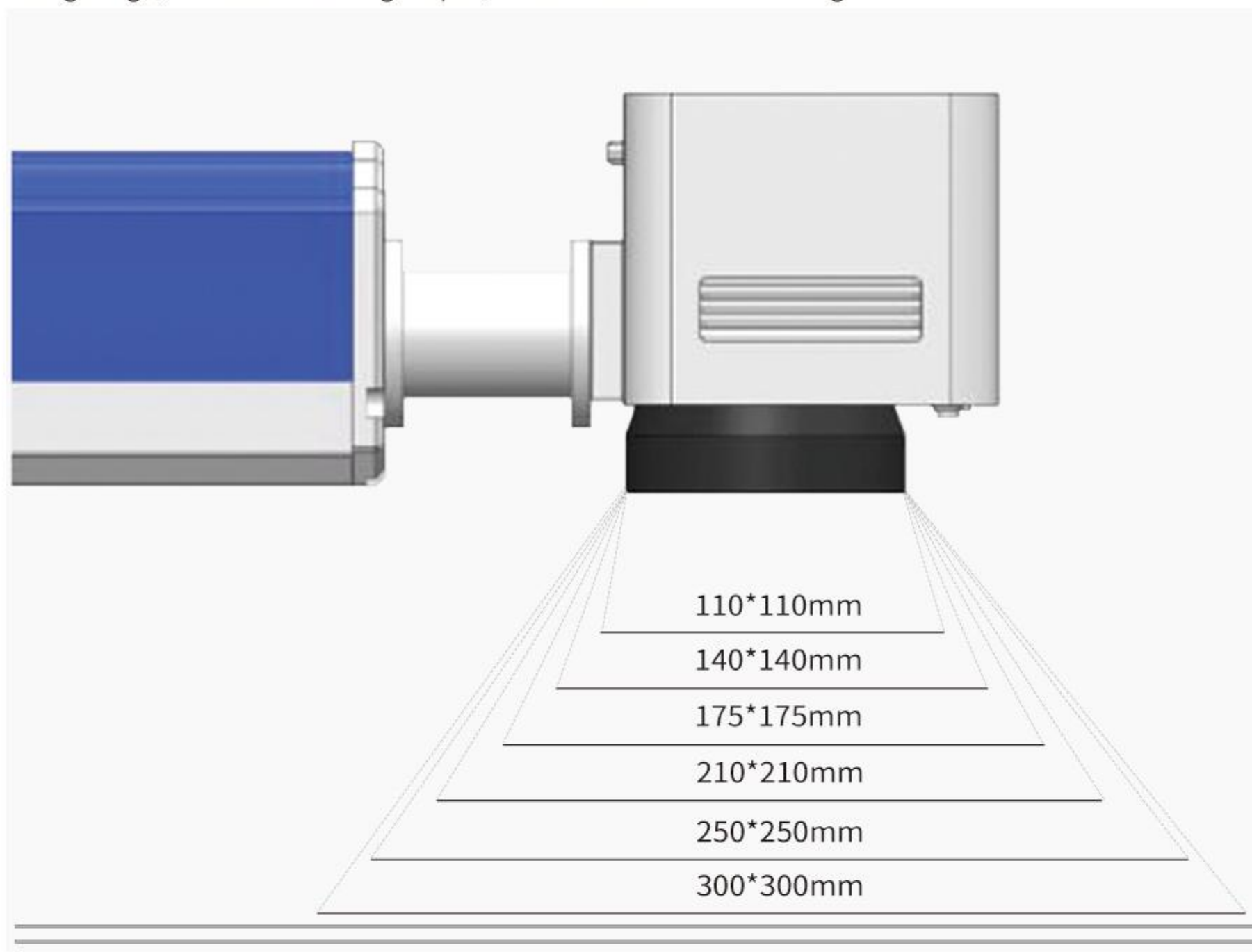
● High-speed (Optional)



● Dual Red Light (Optional)

Field Lens

The incident laser reflected by the galvanometer at different angles is focused on the same plane to ensure the accuracy of the process pattern throughout the entire area. Meanwhile, focal length of the field lens directly determines marking range. The shorter the focal length, the smaller the marking range, the smaller the light spot, and the clearer the marking effect.

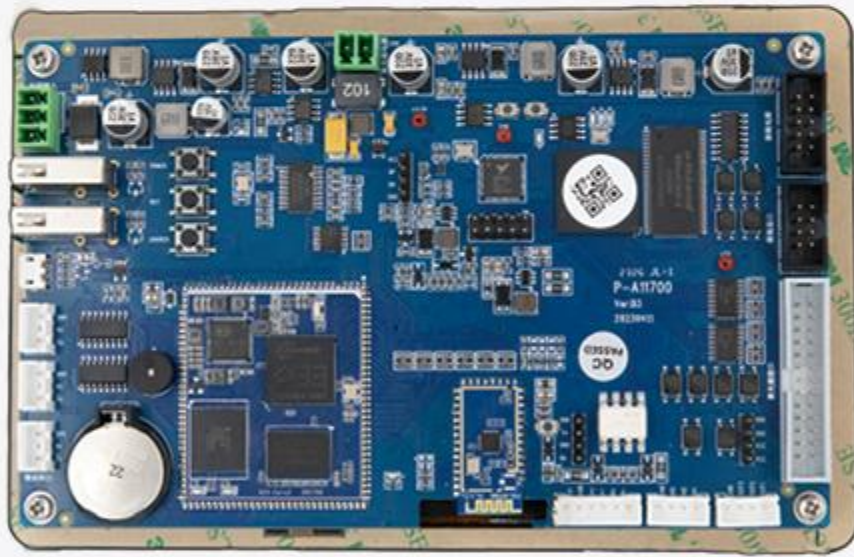


Comparison Table Of Field Lens Optional Range

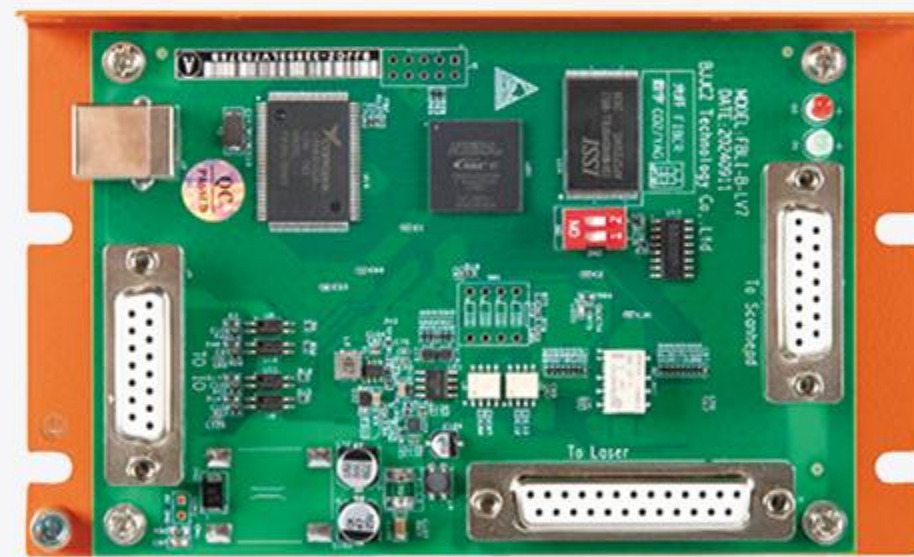
Focal Length	F=150mm (Standard)	F=200mm	F=250mm	F=300mm	F=360mm	F=420mm
Scanning range	110*110mm	140*140mm	175*175mm	210*210mm	250*250mm	300*300mm
Working range	136.33mm	181.47mm	237mm	284.4mm	350.9mm	411.1mm

Control Card

Flying laser marking machine system operates extremely stably, with good consistency in marking quality. Its ultimate dynamic marking and real-time tracking capabilities can effectively improve marking speed and accuracy. According to actual production needs, you can also choose the upgraded LV7 control card from JCZ, which is compatible with multiple laser types and extend axis modes. Has strong anti-interference ability and can achieve precise marking control.



● BSL Control Card (Standard)



● JCZ-LV7 Control Card (Optional)

BSL High-speed Control System

Software has powerful functions, supports switching between multiple languages, and has a graphical interface that is easy to operate and user-friendly; Supports various vector graphics, TrueType fonts, and can generate and optimize various one-dimensional and two-dimensional codes; Built in core algorithm that can dynamically adjust marking instructions based on real-time location, improving marking efficiency; Provide a dedicated and intuitive flight marking setting window for convenient parameter setting, delay, marking direction, etc.



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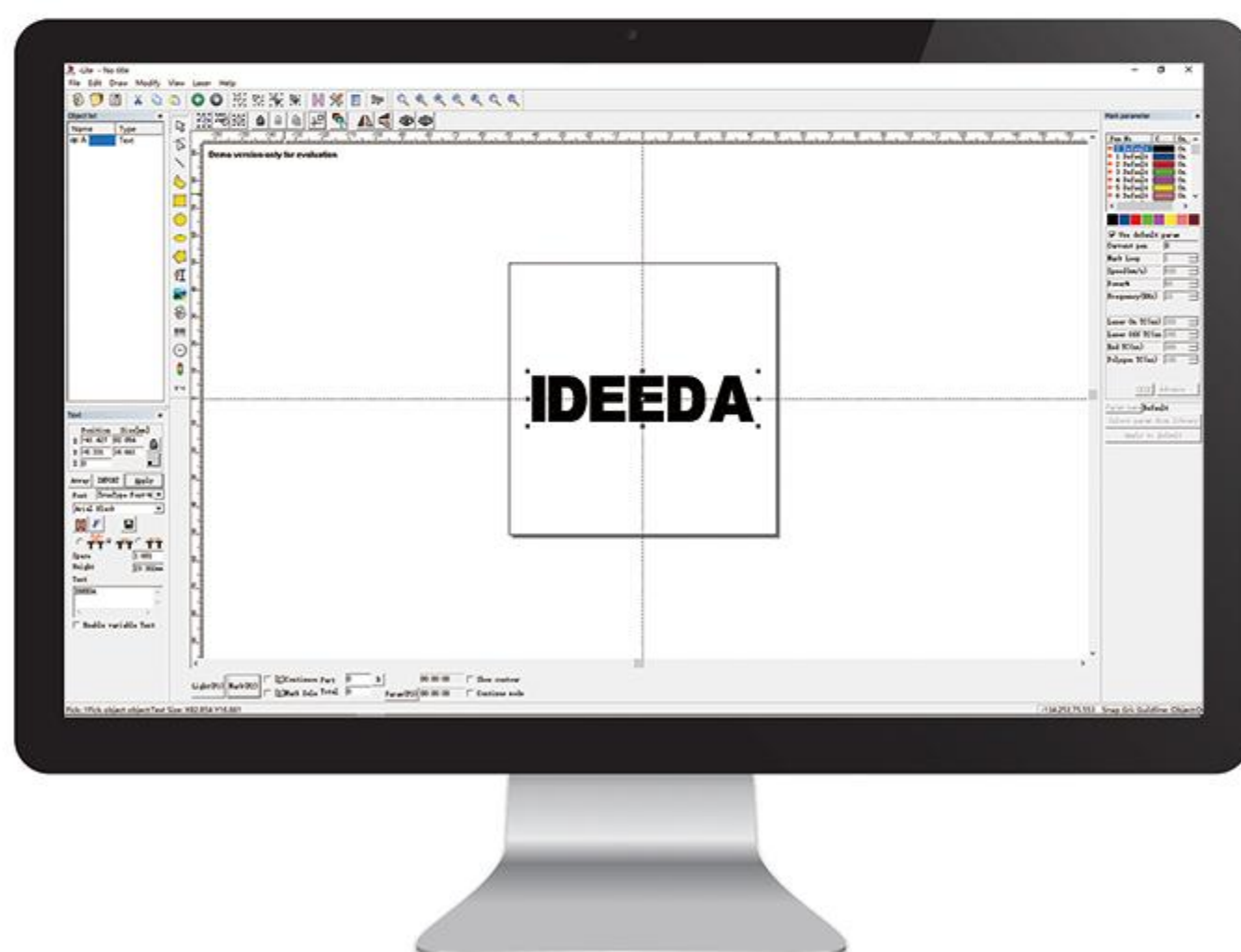


Ezcad2 (Compatible with LightBurn)

It adopts the Ezcad2 professional marking software, which is easy to operate and get started with.

Supports Windows system, compatible with LightBurn; Software support PLT/DXF/AI/SVG/JPG, GIF, BMP etc. file format;

Software supports text, characters, images, vector graphics, barcodes, QR codes and other contents, as well as regular code skipping contents such as serial numbers, dates and batch numbers.



Computer

Flying laser marking machine adopts a 10.1-inch high-definition touch screen with a metal shell, and the small screen design saves more space; Equipped with professional flight parameter settings, easy to operate and learn. Optional industrial control computer, touch integrated computer, built-in Windows system, rich compatibility, supports multiple software, can be connected to various extensions, sturdy and durable.



Accessories

Standard Accessories



Protective glasses



USB flash drive



Calibration paper



Focusing film



Foot switch



Ruler



Hexagonal wrench



Positioning bar



Data line



Power cord

Optional Accessories



Vision CCD



XY moving platform



Smoke purifier



Assembly line