

# MOPA Cabinet

## Fiber Laser Marking Machine

### DLM-MC

#### Laser Power:

20W / 30W / 60W / 100W (Optional)

#### Marking Range:

110\*110 / 150\*150 / 175\*175 /  
220\*220 / 300\*300mm (Optional)



### Machine Introduce

The DLM-MC fiber MOPA cabinet-type laser marking machine features a large worktable, strong scalability, and a wide range of applications. It is suitable for various production needs such as factory processing and large-scale marking.

**High beam quality:** MOPA laser has a small focused spot and clear edges, which makes marking effect more rich and delicate.

**High precision:** The pulse width of MOPA laser is adjustable, with minimal thermal impact and minimal thermal damage to the material surface, enabling ultra-fine marking effects.

**Rich marking effects:** The MOPA laser's outstanding pulse control capability enables precise marking in color/black, fine patterns, and heat-sensitive materials.

#### Common material range:

Specializing in blackening of alumina, blackening and coloring of stainless steel and titanium.

It is applicable to marking on various metal materials such as iron, copper, aluminum, gold and silver, as well as some non-metal materials like PC, ABS, PVC and PC+ABS.

**Application fields:** Widely used in industries such as 3C, automotive parts, electronic components, integrated circuits (IC), precision instruments, hardware products, building materials, watches, jewelry, and craft gifts.

## Machine Size



Machine Front



Machine Side



Component Introduction

|                |                |
|----------------|----------------|
| Model          | DLM-MC         |
| Machine Size   | 600*800*1340mm |
| Machine Weight | 68kg           |
| Packing Size   | 750*900*1150mm |
| Packing Weight | 105kg          |

## Parameter Information

| Model           | DLM-MC                 |                                       |           |           |           |           |
|-----------------|------------------------|---------------------------------------|-----------|-----------|-----------|-----------|
| Laser Parameter | Laser wavelength       | 1064nm                                |           |           |           |           |
|                 | Output power           | 20W                                   | 30W       | 60W       | 100W      |           |
|                 | Pulse width            | 2~500ns                               |           |           |           |           |
|                 | Repetition frequency   | 1~4000kHz                             |           |           |           |           |
|                 | Power adjustable range | 10~100%                               |           |           |           |           |
| Galvanometer    | Marking speed          | 7000mm/s                              |           |           |           |           |
|                 | Marking depth          | ≤0.2mm （View materials）               |           |           |           |           |
|                 | Repeatability accuracy | 0.01mm                                |           |           |           |           |
|                 | Min line width         | 0.06mm @ F=163mm （View materials）     |           |           |           |           |
|                 | Min character          | 0.2mm @ F=163mm                       |           |           |           |           |
| Field Lens      | Focal length           | F=163mm                               | F=210mm   | F=254mm   | F=330mm   | F=420mm   |
|                 | Marking range          | 110*110mm                             | 150*150mm | 175*175mm | 220*220mm | 300*300mm |
| Control System  | Control card           | JCZ-LV7                               |           |           |           |           |
|                 | Software system        | Ezcad 2 （Compatible with LightBurn）   |           |           |           |           |
|                 | Software language      | CN/EN/DE/FR/ES/TC/JA/KOR etc.         |           |           |           |           |
|                 | Support 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                             |           |           |           |           |

## Optional Type



● DLM-MD MOPA Desktop



● DLM-MC MOPA Split

## Sample



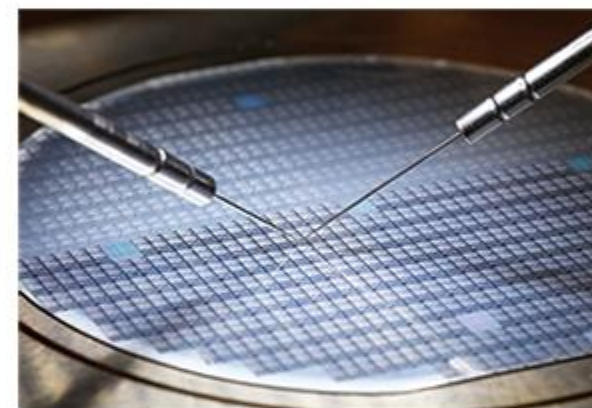
## Application Scenarios



● 3C Electronics Industry



● IC Industry



● Semiconductor Industry



● Kitchen and Bath Industry



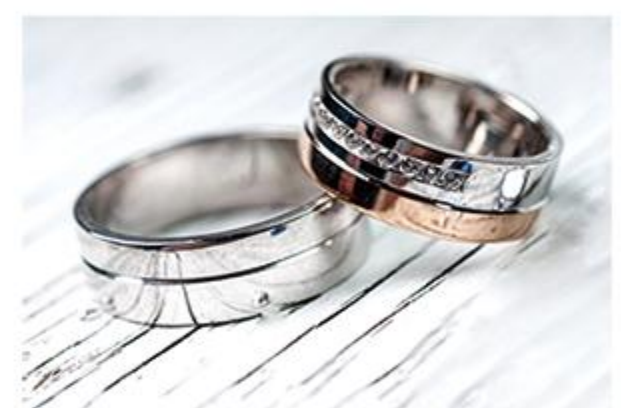
● Building Materials Industry



● Packing Industry



● Medical Industry

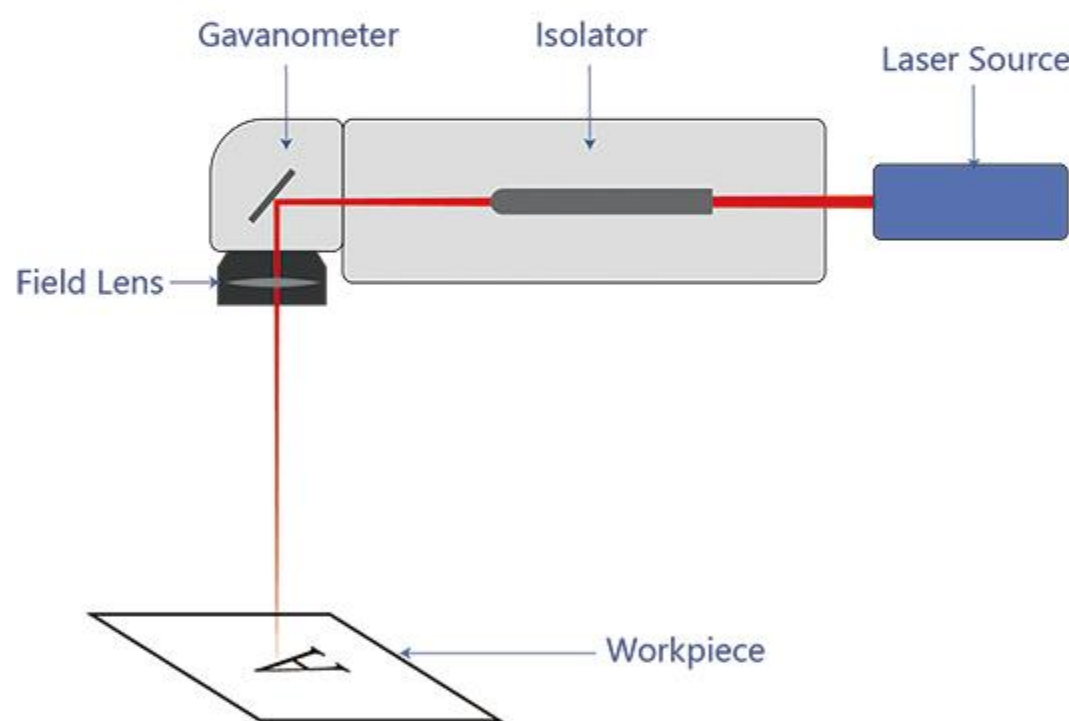


● Jewellery Industry

## Core Component

### Laser Source

MOPA laser marking machine achieves diverse, high-quality and low-damage marking effects by adjusting the parameters of the laser pulses generated by the laser and precisely controlling the interaction between the pulses and the materials.



### Common Brand



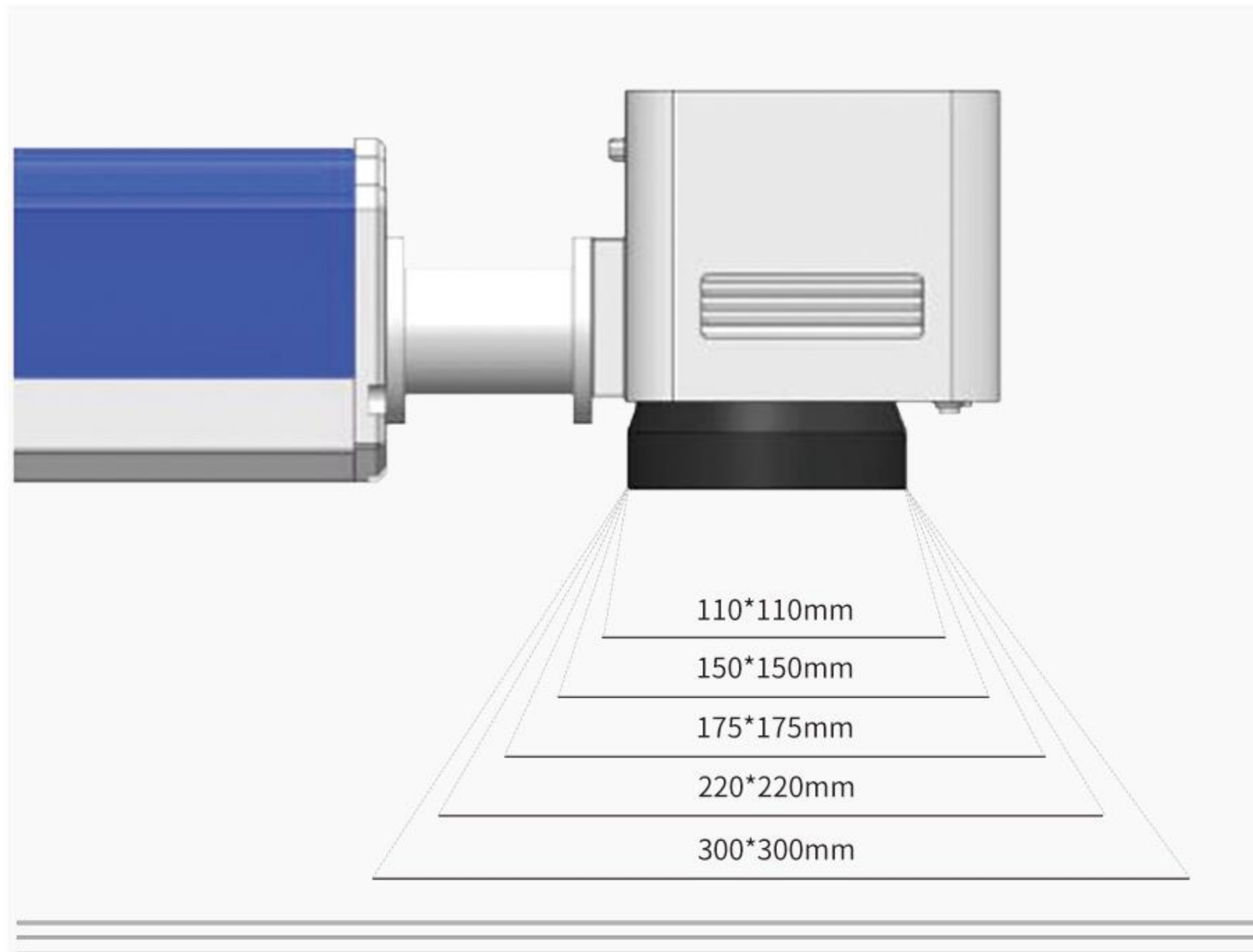
### Galvanometer

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.



## 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.

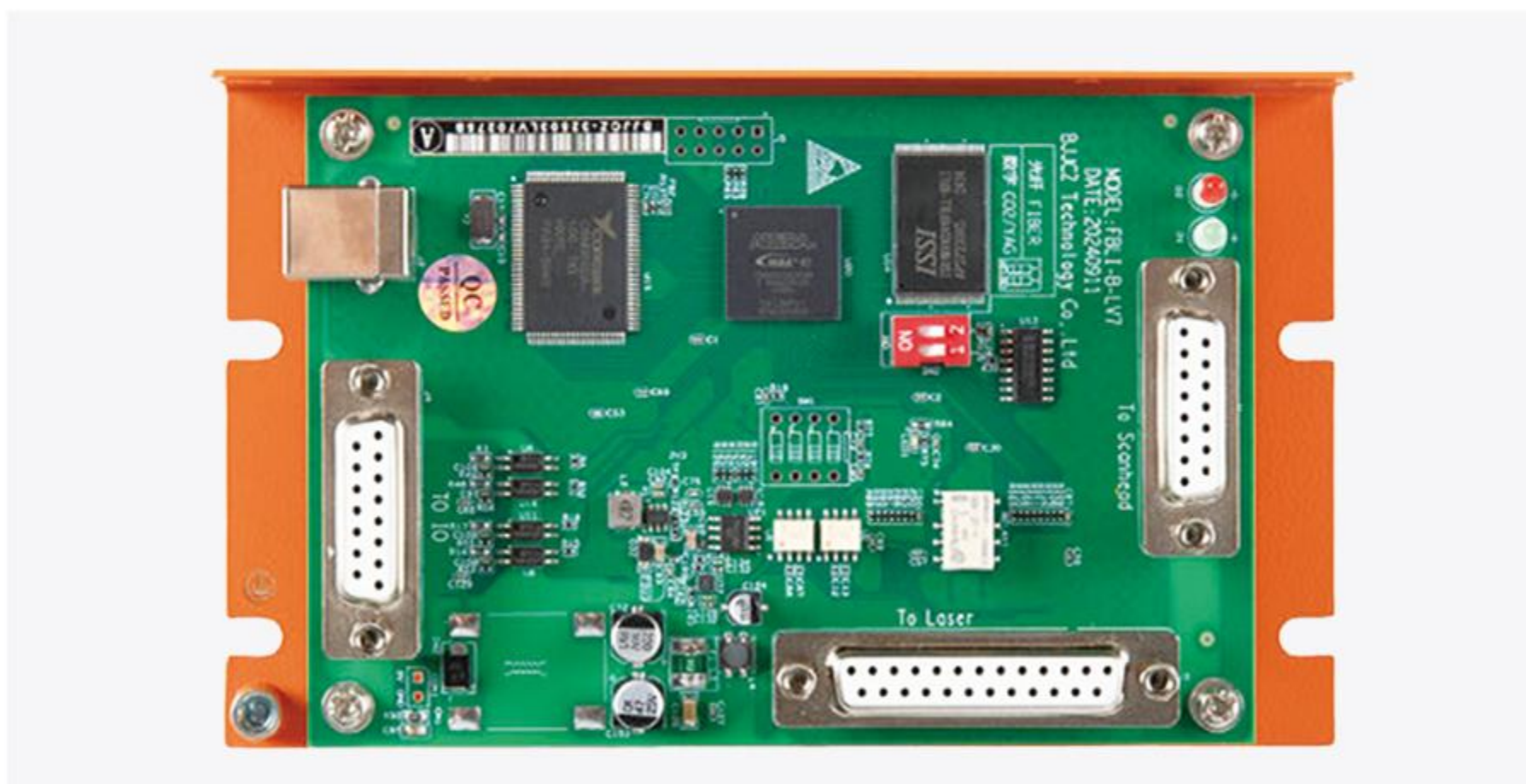


**Comparison Table Of Field Lens Optional Range**

| Focal Length   | F=163mm<br>(Standard) | F=210mm   | F=254mm   | F=330mm   | F=420mm   |
|----------------|-----------------------|-----------|-----------|-----------|-----------|
| Scanning Range | 110*110mm             | 150*150mm | 175*175mm | 220*220mm | 300*300mm |
| Working Range  | 176.94mm              | 228.63mm  | 271.98mm  | 352.47mm  | 438mm     |

## Control Card

JCZ Upgraded LV7 Control Card, compatible with multiple laser types and extended axis modes. Has strong anti-interference ability and can achieve precise marking control.

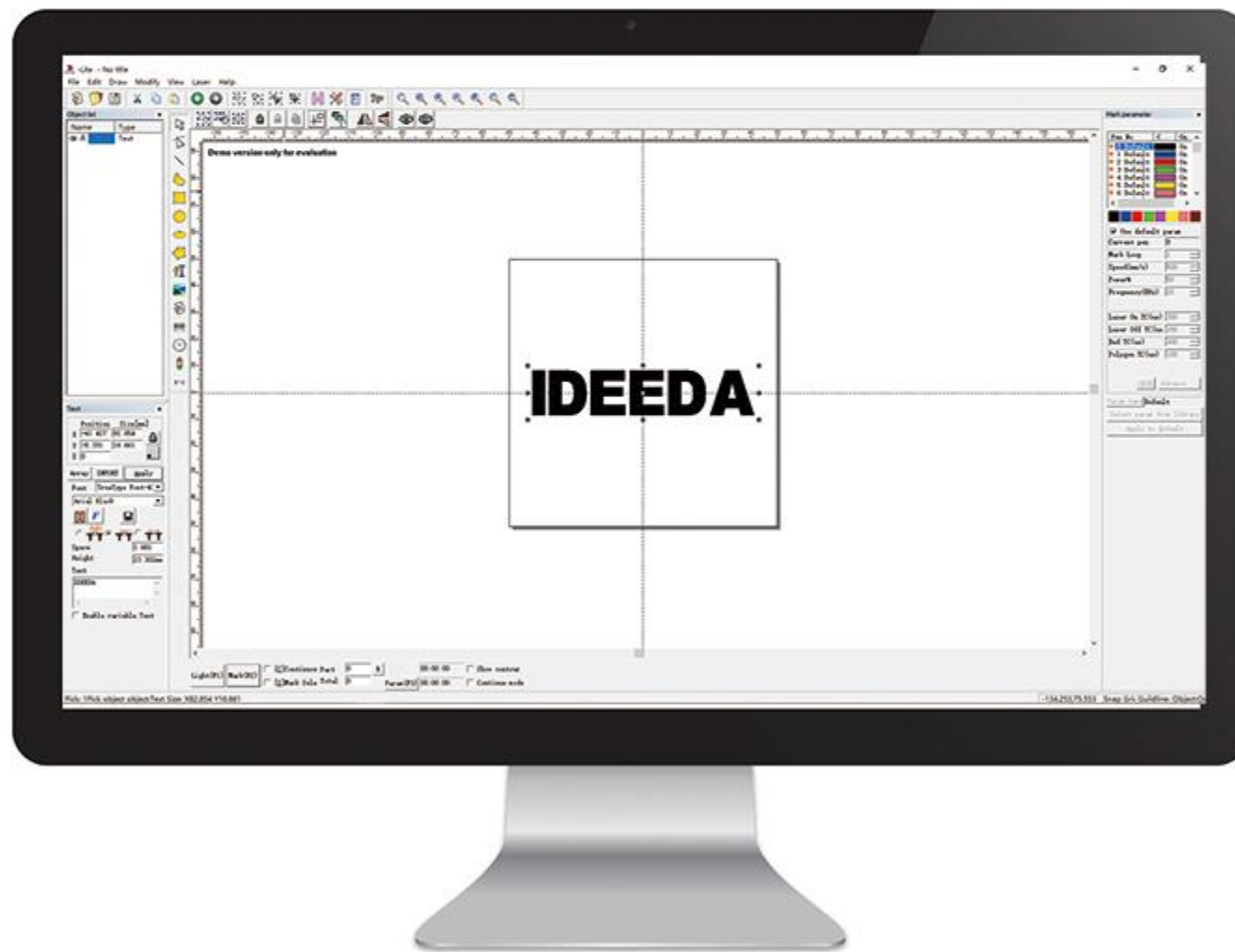


## Ezcad2 (Compatible with LightBurn)

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.



B:76015 REG NO.255  
BEST BEFORE:05/23/2025  
MEG: 10/03/2022



## Conlumn

With a 500mm itinerary column, other specifications of columns such as 800mm itinerary and electric can be selected according to the marking range and workpiece size requirements.



## Accessories

### Standard Accessories



Protective glasses



USB flash drive



Calibration paper



Focusing film



Foot switch



Ruler



Hexagonal wrench



Positioning bar



Data line

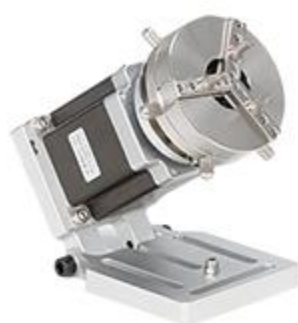


Power cord

### Optional Accessories



Chuck rotating fixture



Elastic rotating fixture



Roller rotating fixture



Lifting platform



Rotating disk



Fixed fixture



XY moving axis



Vision CCD