

OMTech LYF-50W

OMTech 50W Fiber Laser Engraver Instruction Manual

Model: LYF-50W

Brand: OMTech

INTRODUCTION

This manual provides essential information for the safe and efficient operation of your OMTech 50W Fiber Laser Engraver. Please read thoroughly before use.

SAFETY INFORMATION

- Always wear protective eyewear (safety goggles included) when operating the laser engraver.
- Ensure proper ventilation to avoid inhaling fumes during engraving.
- Familiarize yourself with the emergency stop button location and function.
- Do not operate the machine rapidly or out of sequence; allow a 3-second interval between operations.
- This is a Class 2 laser product (0.874 mW output power).

SETUP GUIDE

Unpacking and Initial Assembly

Carefully unpack all components from the shipping crate. Ensure all parts listed in the packing list are present.

Your browser does not support the video tag.

Video Description: This video demonstrates the step-by-step installation process for the OMTech fiber laser engraver, including attaching the laser arm and connecting components.

Your browser does not support the video tag.

Video Description: A detailed guide on setting up your OMTech laser engraver, covering initial assembly and connections.

Component Identification



Image Description: A visual overview of the main components of the OMTech 50W Fiber Laser Engraver, including the main unit, laser arm, and control panel.

Connecting Power and USB

Connect the power cable to a standard 110V power supply. Connect the machine to your computer via the provided USB cable.

Your browser does not support the video tag.

Video Description: This video provides a comprehensive setup guide for the compact fiber marker, detailing how to connect the power, USB, and other essential components.

Software Installation (EzCad2)

Install the EzCad2 software from the provided USB drive. Ensure drivers are correctly installed via Device Manager.



Image Description: An image showing the EzCad2 software interface on a laptop, which is used to control the OMtech 50W Fiber Laser Engraver.

OPERATING INSTRUCTIONS

Focusing the Laser

Use the red dot pointer for precise calibration and focusing. Adjust the laser arm height until the two red dots

converge into one for optimal focus.

RED DOT GUIDANCE

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Visible Laser Pointers Provide Easy Focusing & Clear Preview



Image Description: This image illustrates the red dot guidance system, which helps in precisely focusing the laser on the material before engraving.

Engraving Process

Import your design into EzCad2, set engraving parameters (speed, power, frequency), and preview the engraving area using the frame function. Wear safety goggles before initiating engraving.

Your browser does not support the video tag.

Video Description: A short video demonstrating the OMTEch fiber laser engraver in action, showing the laser marking a surface.

Your browser does not support the video tag.

Video Description: This video shows the OMTech fiber laser engraver working with a rotary axis to engrave cylindrical objects.



The image shows a SINO-GALVO fiber laser engraver system. It consists of a white and red SINO-GALVO galvanometer unit mounted on a black base, connected to a blue laser head. The background is dark blue with a subtle grid pattern.

7000^{mm/s}

PROFESSIONAL PRECISION

Outstanding Accuracy & Marking up to **7000 mm/s**
Thanks to Our Sino-Galvo Galvanometric System



The image shows two examples of engraved designs. On the left, a circular inset shows a close-up of a textured, fan-like pattern with a label indicating a **32 μm Spot Size**. On the right, a rectangular plate features a detailed engraving of a flower with multiple petals and leaves.

Image Description: This image highlights the professional precision achieved by the OMTech engraver, showcasing fine details on an engraved design.

Rotary Axis Operation (Optional)

For engraving curved surfaces, connect a compatible rotary axis (not included) to the 4-pin port.



EZCAD2 INCLUDED



Our EzCad2-Based Device Works with LightBurn
for Easy Creation of Stunning Patterns & Images

Image Description: An image depicting the OMTech fiber laser engraver set up to engrave on curved surfaces using an optional rotary axis.

MAINTENANCE

Regularly clean the lens and work area to ensure optimal performance. Refer to the user manual for detailed cleaning procedures and recommended maintenance schedules.

The laser source has an average service life of over 100,000 hours, requiring minimal maintenance for the laser unit itself.

TROUBLESHOOTING

Common Issues and Solutions

- **Laser not firing:** Check power connections, emergency stop button, and ensure the "Fiber Laser" button is pressed. Verify the "Scan Head" key is turned to the ON position.
- **Poor engraving quality:** Re-check focal length using the red dot pointer. Ensure material is clean and flat on the workbed. Adjust engraving parameters (speed, power) in the software.
- **Software not recognizing machine:** Reinstall USB drivers from the provided USB drive. Check USB cable connection.

SPECIFICATIONS

Model Number: LYF-50W

Laser Power: 50W Solid-State Fiber Laser

Laser Class: 2 (0.874 mW output power)

Work Area: 7.9 x 7.9 inches (200 x 200 mm)

Engraving Speed: Up to 10,000 mm/s

Engraving Precision: 0.01 mm

Per-Pass Depth: 0.1 mm

Laser Source Life: Over 100,000 hours

Software Compatibility: EzCad2 (Windows), LightBurn compatible

Product Dimensions: 30.5 x 17.7 x 31.1 inches

Material Capacity: Up to 44.1 lb.

WARRANTY AND SUPPORT

This product includes a 30-day return policy for refund or replacement. For specific warranty details beyond this period, please contact OMTech Direct.

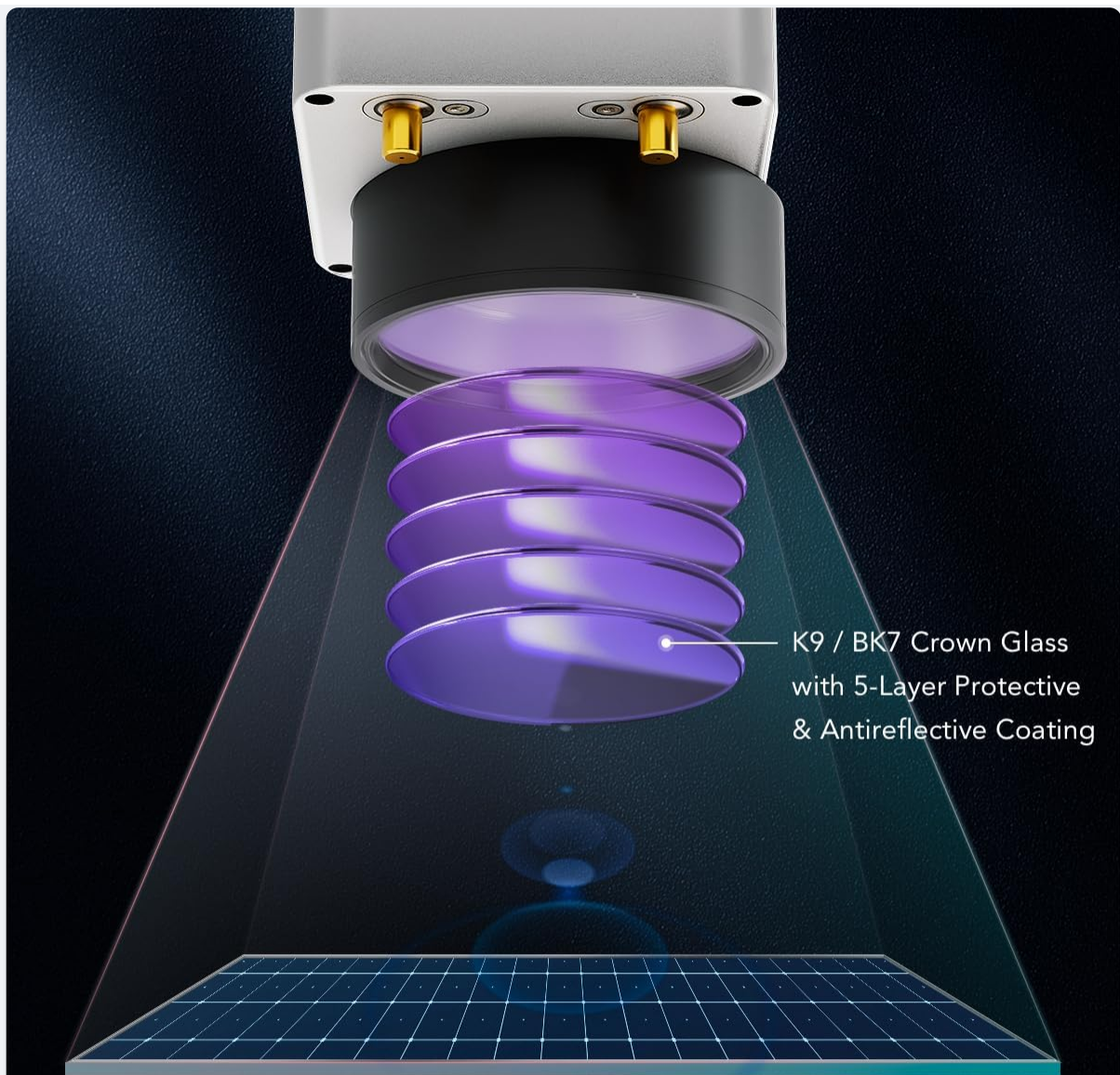
OMTech offers U.S.-based technical support and 24/7 online customer service. Our teams are available Monday to Friday, 8:30 AM to 4:30 PM PST.

For support, visit the [OMTech Store on Amazon](#) or contact support@omtechlaser.com.

ADDITIONAL RESOURCES

For further assistance and community engagement, consider joining official laser user groups on Facebook or checking instructional videos on the OMTech YouTube channel.

A QR code is provided on the machine for the latest version of the user manual and additional resources.



PREMIUM SCANNING LENS

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F-Theta Scanning Lens Offers
7.9"×7.9" (200×200 mm) Range with Less than 1% Distortion

Image Description: A product image showing the OMTech 50W Fiber Laser Engraver, with a visible QR code that links to the latest user manual and support resources.