

OMTech Galvo 50W with Lightburn

OMTech 50W Fiber Laser Engraver with LightBurn Instruction Manual

Model: Galvo 50W with Lightburn

1. PRODUCT OVERVIEW

The OMTech 50W Fiber Laser Engraver is a high-precision marking and etching machine designed for various materials, including metals, steel, gold, and jewelry. It features a 50W solid-state laser source, a high-speed galvanometric system, and a 7.9x7.9 inch workbed. This machine is compatible with LightBurn and EzCad2 software, offering versatility for detailed engraving tasks.

Key Features:

- **50W Solid-State Laser:** Provides high speed and precision for etching precious metals. The laser source has an average service life exceeding 100,000 hours.
- **Precision Optics:** Equipped with a high-speed galvanometric system for quick scanning and engraving. The compact F-theta field lens ensures throughput with less than 1% distortion.
- **200x200 mm Workbed:** Features a 7.9x7.9 inch work area with a laser locator for precise calibration and focusing. Protective eyewear is included for safety.
- **Easy Operation:** Includes EzCad2 software for Windows, supporting various image formats. An emergency button enhances safety, and a 4-pin port allows for rotary axis connection (not included).
- **Wide Application:** This Class 2 laser (0.874 mW output power) is suitable for engraving detailed designs, custom logos, and serial numbers on various materials.

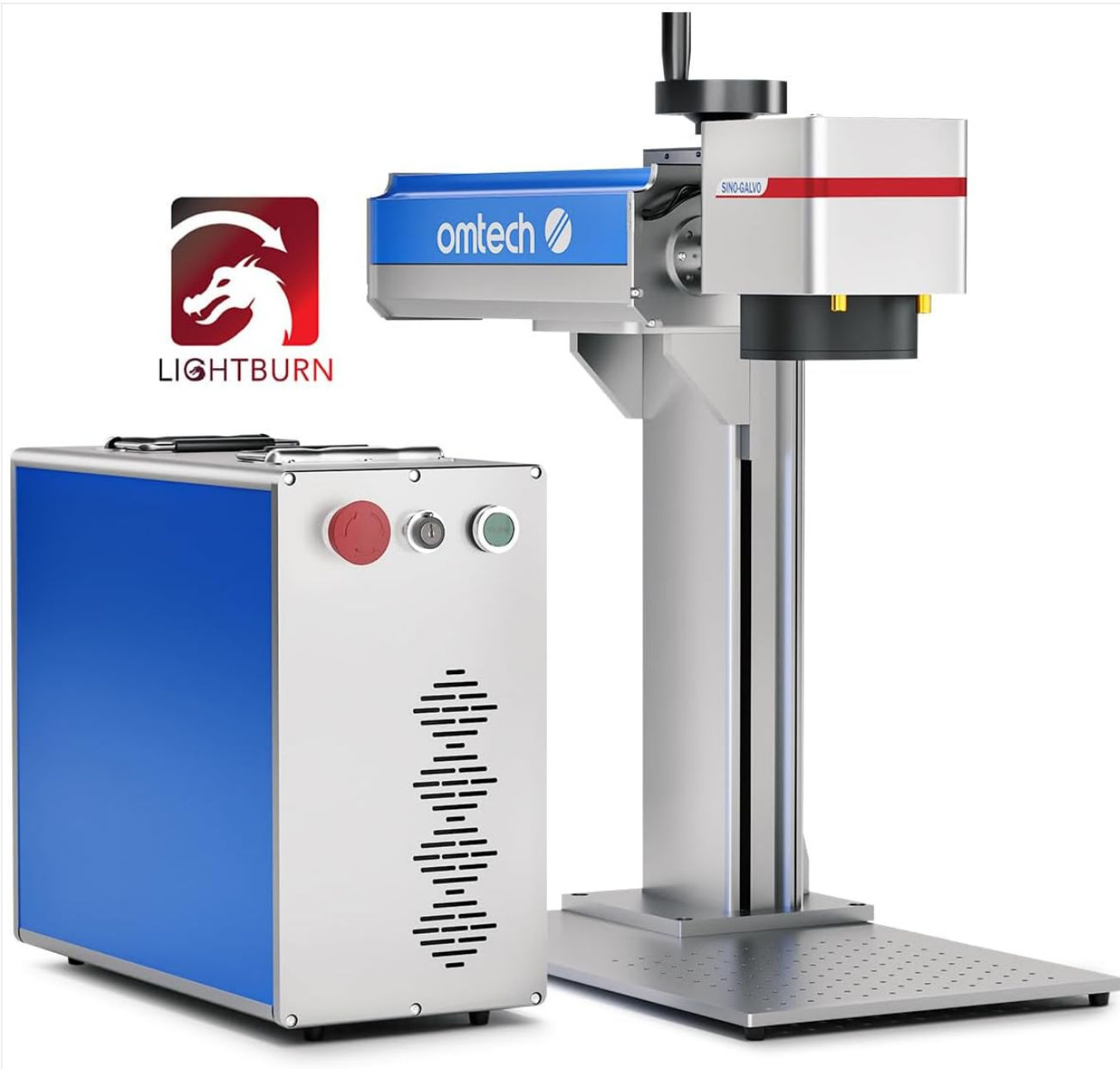


Image: The OMTech 50W Fiber Laser Engraver with its main components, including the laser head and control unit, alongside the LightBurn software logo.

2. SETUP

Proper setup is crucial for the safe and efficient operation of your OMTech Fiber Laser Engraver. Follow these steps to assemble and connect your machine.

2.1 Unpacking and Assembly

Carefully remove all components from the packaging. Ensure all protective materials are removed from the laser head, workbed, and control unit. Assemble the laser head onto the vertical column and secure it to the workbed base. Connect the control unit to the laser head.

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Video: This video demonstrates the assembly process for the OMTech fiber laser engraver, showing how to connect the main components and prepare the machine for use.

50W SOLID-STATE LASER



Perfect for Anything Requiring Extreme Precision

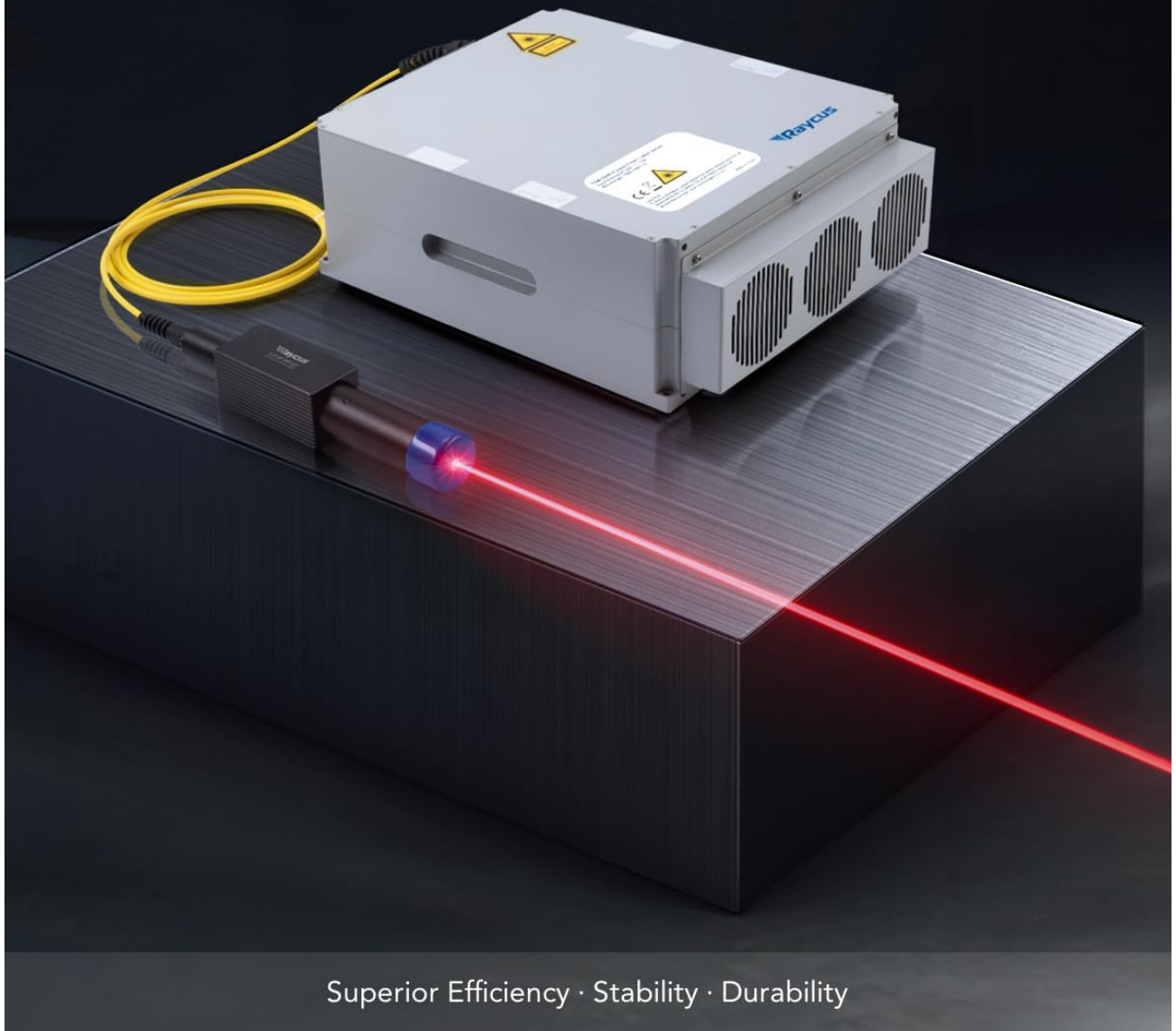


Image: A view of the OMTech Fiber Laser Engraver's main components, including the laser head, vertical column, and control unit, laid out before assembly.

2.2 Electrical and USB Connections

Connect the power cord to the control unit and a grounded electrical outlet. Connect the USB cable from the control unit to your computer. If using a foot pedal switch, connect it to the designated port on the control unit. Ensure all connections are secure before powering on the machine.



LIGHTBURN INCLUDED

Edit, Arrange, and Take Your Designs to New Heights
with the Bundled Feature-Packed LightBurn Software

Compatible with



Windows



Linux



MacOS

Image: Close-up view of the OMTech Fiber Laser Engraver's control unit, highlighting the ports for the cable to the lens, USB to computer, foot pedal switch, and power cord.

2.3 Software Installation and Connection

Install the provided EzCad2 software on your Windows computer. For LightBurn compatibility, ensure the necessary drivers are installed. Follow the software's instructions to connect your laser engraver to the computer. The device discovery wizard in LightBurn will help identify and configure your machine.

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Video: This video provides a step-by-step guide on how to connect your laser engraver with LightBurn software, including device discovery and naming.

3. OPERATING INSTRUCTIONS

Operating the OMTech Fiber Laser Engraver involves preparing your design, setting up the material, and initiating the engraving process. Always wear protective eyewear during operation.

3.1 Material Placement and Focusing

Place your material securely on the workbed. Use the red dot pointer for precise calibration and focusing. Adjust the laser head height until the red dots converge, indicating optimal focus. The grid dots on the workbed can assist with material positioning.



Image: Illustration of the red dot guidance system on the OMTech Fiber Laser Engraver, showing how visible laser pointers assist with easy focusing and clear preview of the engraving area.

3.2 Design Preparation and Engraving

Prepare your design using LightBurn or EzCad2 software. Import various image formats and adjust parameters such as speed, power, and frequency according to your material and desired effect. Initiate the engraving process through the software. The machine operates at speeds up to 10,000 mm/s for efficient task completion.

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Video: A demonstration of the OMTech fiber laser engraver in operation, showing the laser beam marking a metal surface with precision.

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Video: This video highlights the ultra-high engraving speed of the OMTech fiber laser engraver, showcasing rapid material marking.

3.3 Safety Features

The machine includes an emergency stop button for immediate shutdown in case of an issue. A galvo head lock and access key prevent unauthorized use, ensuring a secure operating environment.

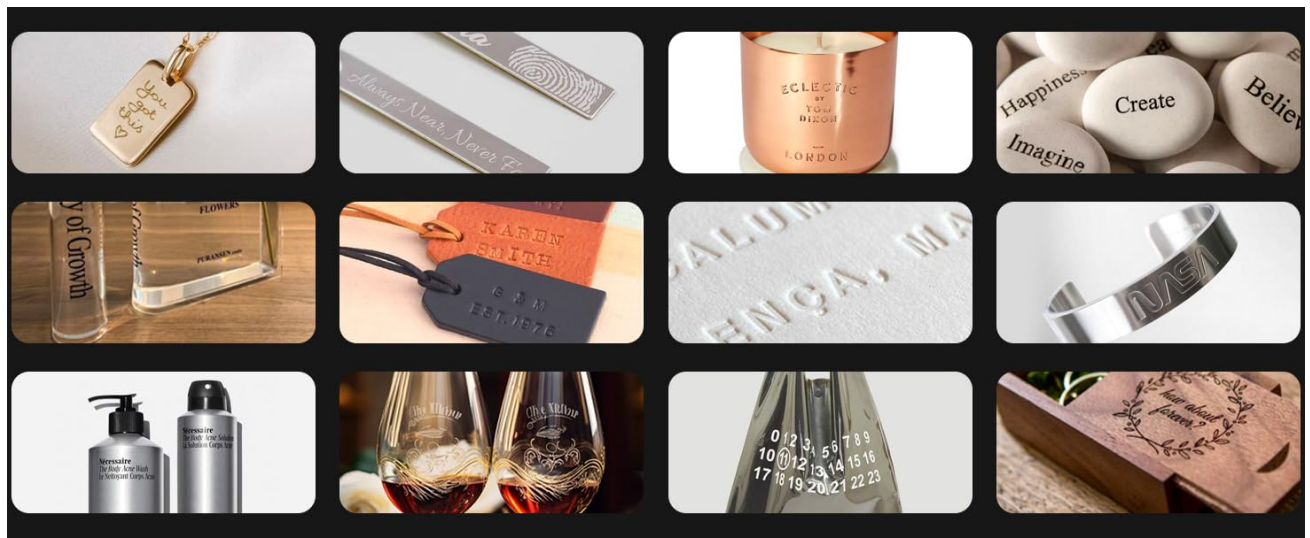


Image: Diagram illustrating the safe and secure controls of the OMTech Fiber Laser Engraver, including the laser button, galvo head lock, and emergency stop button.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your laser engraver. Always power off and unplug the machine before performing any maintenance.

- **Lens Cleaning:** Periodically inspect and clean the F-theta lens using appropriate lens cleaning solutions and cloths to maintain engraving quality.
- **Workbed Cleaning:** Keep the workbed clean from debris and residue to ensure proper material placement and prevent interference with the laser path.
- **Ventilation Check:** Ensure the ventilation system is clear and unobstructed to prevent overheating and maintain air quality.
- **Cable Inspection:** Regularly check all cables for any signs of wear or damage. Replace any damaged cables immediately.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your laser engraver.

• **Laser Not Firing:**

- Check if the machine is powered on and all cables are securely connected.
- Ensure the emergency stop button is not engaged.
- Verify that the software is correctly connected to the laser.

• **Poor Engraving Quality:**

- Confirm the laser is properly focused on the material surface.
- Clean the F-theta lens for any dust or residue.
- Adjust power and speed settings in the software for the specific material being used.

• **Software Connection Issues:**

- Restart both the laser engraver and your computer.
- Reinstall the laser drivers and software if necessary.
- Ensure no other programs are interfering with the USB connection.

6. SPECIFICATIONS

Feature	Detail
Product Dimensions	30.5 x 17.7 x 31.1 inches
Item Model Number	RYGEL-FMM5RW2U1
Item Weight	120 pounds
Manufacturer	OMTech
Date First Available	October 16, 2023

7. WARRANTY AND SUPPORT

OMTech is committed to providing reliable products and customer support.





- **Customer Support:** For any inquiries or assistance, please contact OMTech Direct customer support.
- **Technical Support:** U.S.-based technical support is available for quick resolution of any issues.
- **Warranty:** This product typically includes a two-year support period. Please refer to your purchase documentation for specific warranty details.



Image: A visual representation of the OMTech customer support team, emphasizing reliable local support in the U.S.

Related Documents - Galvo 50W with Lightburn

	<p>OMTech Solis Duo Dual Laser Engraver User Manual</p> <p>Comprehensive user manual for the OMTech Solis Duo Dual Laser Engraver (20W Fiber & 20W Diode). Covers safety precautions, technical specifications, component identification, assembly, software installation, operation procedures, maintenance, and additional applications.</p>
	<p>OMTech Polar 350 50W Desktop Laser Engraver Owner's Manual and Guide</p> <p>This comprehensive owner's manual provides detailed instructions for the installation, operation, safety, and maintenance of the OMTech Polar 350 50W Desktop Laser Engraver. Learn about its features, specifications, and best practices for use.</p>
	<p>OMTech LYF-60W MOPA Fiber Laser Marking Machine User Manual</p> <p>Comprehensive user manual for the OMTech LYF-60W MOPA Fiber Laser Marking Machine, detailing installation, operation, safety protocols, maintenance, and troubleshooting for personal and professional applications.</p>
	<p>OMTech Solis Duo Dual Laser Engraver User Manual</p> <p>Comprehensive user manual for the OMTech Solis Duo Dual Laser Engraver, covering safety, specifications, package contents, components, assembly, software installation, operation, maintenance, and additional applications. Learn how to safely and effectively use your laser engraver.</p>

<div data-bbox="124 100 159 123"></div> <div data-bbox="140 129 290 174"><p>LYF-50W Split Fiber Marking Machine User Manual</p></div> <div data-bbox="159 183 274 313"></div> <div data-bbox="188 324 236 336"><p>Don't forget to follow the safety rules when using the machine</p></div>	<div data-bbox="341 174 1034 206"><p>OMTech LYF-50W Split Fiber Marking Machine User Manual</p></div> <div data-bbox="341 215 1407 286"><p>Comprehensive user manual for the OMTech LYF-50W Split Fiber Marking Machine, covering installation, operation, safety, maintenance, and troubleshooting.</p></div>
<div data-bbox="124 414 159 436"></div> <div data-bbox="151 443 276 488"><p>USB1006c Cabinet Laser Engraver User Manual</p></div> <div data-bbox="116 492 311 638"></div> <div data-bbox="188 638 236 649"><p>Don't forget to follow the safety rules when using the machine</p></div>	<div data-bbox="341 492 1002 524"><p>OMTech USB1006c Cabinet Laser Engraver User Manual</p></div> <div data-bbox="341 533 1471 645"><p>Comprehensive user manual for the OMTech USB1006c Cabinet Laser Engraver. Covers essential safety guidelines, detailed installation procedures, operational instructions, and maintenance procedures for optimal performance and longevity of your CO2 laser engraving machine.</p></div>