OMTech Galvo 50W

OMTech Galvo 50W Fiber Laser Engraver Cutter User Manual

Model: Galvo 50W (LYF-60W)

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your OMTech Galvo 50W Fiber Laser Engraver Cutter. This all-metal body fiber laser engraver is designed for precision marking and cutting on various materials, offering high accuracy and speed.

Key features include a 0.01 mm spot diameter, a 5.9"x5.9" workbed, and a maximum engraving speed of up to 10,000 mm/s. The laser is classified as Class 2 with an output power of 0.874 mW.

Figure 1: OMTech Galvo 50W Fiber Laser Engraver Cutter unit.

2. SAFETY INFORMATION

Always prioritize safety when operating the laser engraver. Failure to follow safety guidelines can result in serious injury or damage to the equipment.

- **Eye Protection:** Always wear appropriate laser safety glasses to protect your eyes from laser radiation.
- **Ventilation:** Ensure adequate ventilation in the work area to remove fumes and particles generated during engraving or cutting.
- **Material Compatibility:** Only engrave or cut materials approved for fiber lasers. Avoid materials that produce toxic fumes or are highly flammable.
- **Emergency Stop:** Familiarize yourself with the location and operation of the emergency stop button.
- **Supervision:** Never leave the machine unattended during operation.

3. SETUP

3.1 Initial Placement and Connections

Place the laser engraver on a stable, level surface. Connect the power cable and ensure all necessary peripheral connections are secure.

3.2 Software Installation and Compatibility

The OMTech Galvo 50W is compatible with LightBurn software and comes pre-loaded with EZCad. Install the required software on your computer (Windows 7, 8, 10, 11, or macOS) to control the laser engraving operations.

3.3 Focusing with Red Dot Pointer

The engraver is equipped with a red dot indicator to assist in adjusting the laser focus. To activate or deactivate the red dot guider, press the dedicated focus button.

Figure 3: Red dot pointer for precise focus adjustment.

3.4 Rotary Axis Connection

For engraving on curved surfaces such as rings and bracelets, the unit includes a rotary axis connection port. Connect a compatible rotary axis accessory to this port as per the accessory's instructions.

Figure 4: The laser engraver supports a rotary axis for cylindrical objects.

4. OPERATING INSTRUCTIONS

4.1 Engraving and Cutting Process

1. Prepare your design in LightBurn or EZCad software.
2. Place the material on the workbed. For curved items, use the rotary axis.
3. Use the red dot pointer to adjust the focus for optimal results.
4. Set the appropriate laser parameters (power, speed, frequency) for your material.
5. Initiate the engraving or cutting process from the software.
6. Monitor the process and ensure proper ventilation.

4.2 High Accuracy and Speed

The laser engraver offers high accuracy at 0.01 mm, allowing for detailed engravings. Its maximum engraving speed of 10,000 mm/s significantly boosts productivity.
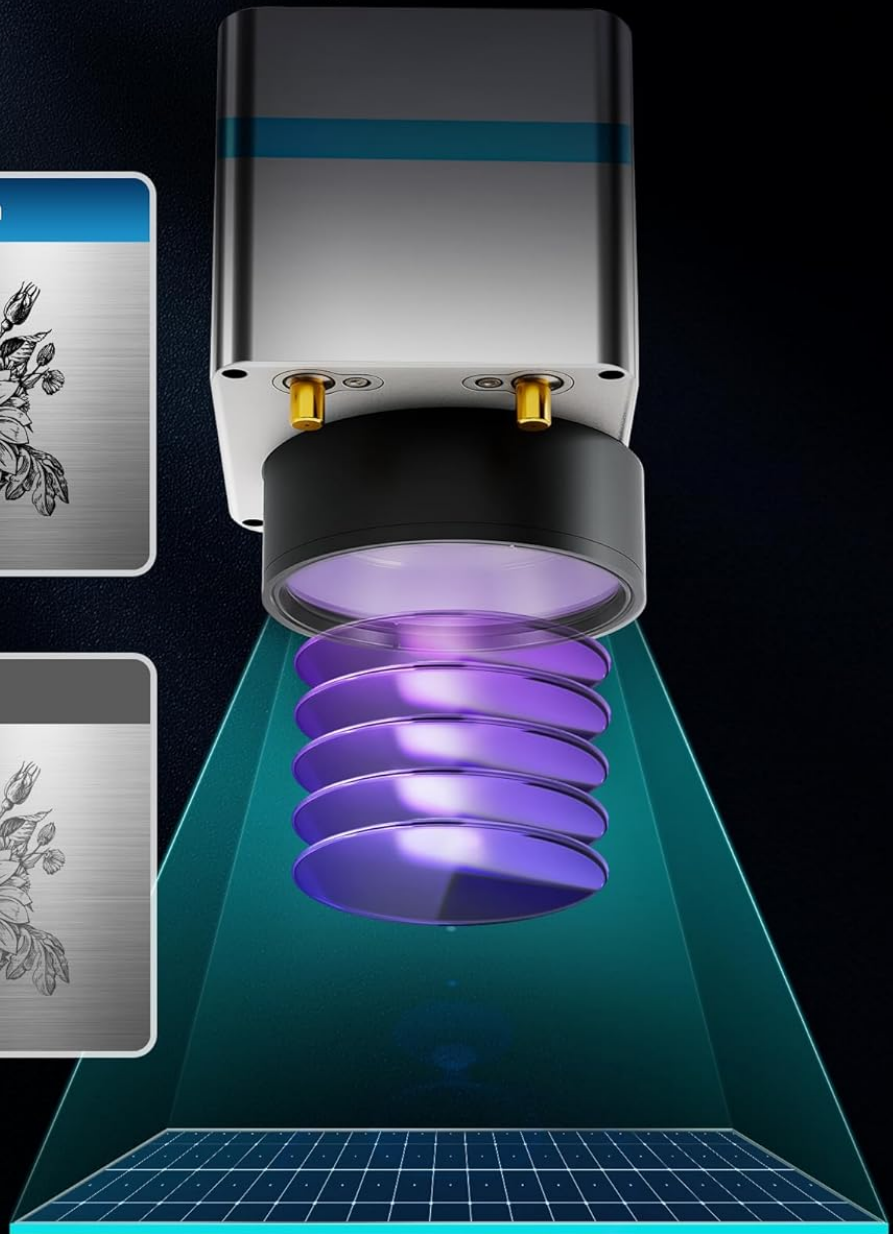
Figure 5: Example of high-accuracy engraving.

Figure 6: Speed comparison highlighting the fiber laser's performance.

4.3 Material Compatibility

The OMTech Galvo 50W Fiber Laser Engraver Cutter is suitable for marking and etching a wide range of materials, including but not limited to:

- **Metals:** Brass, Aluminum, Silver, Tungsten, Titanium, Gold, Stainless Steel, Cast Aluminum, Copper.
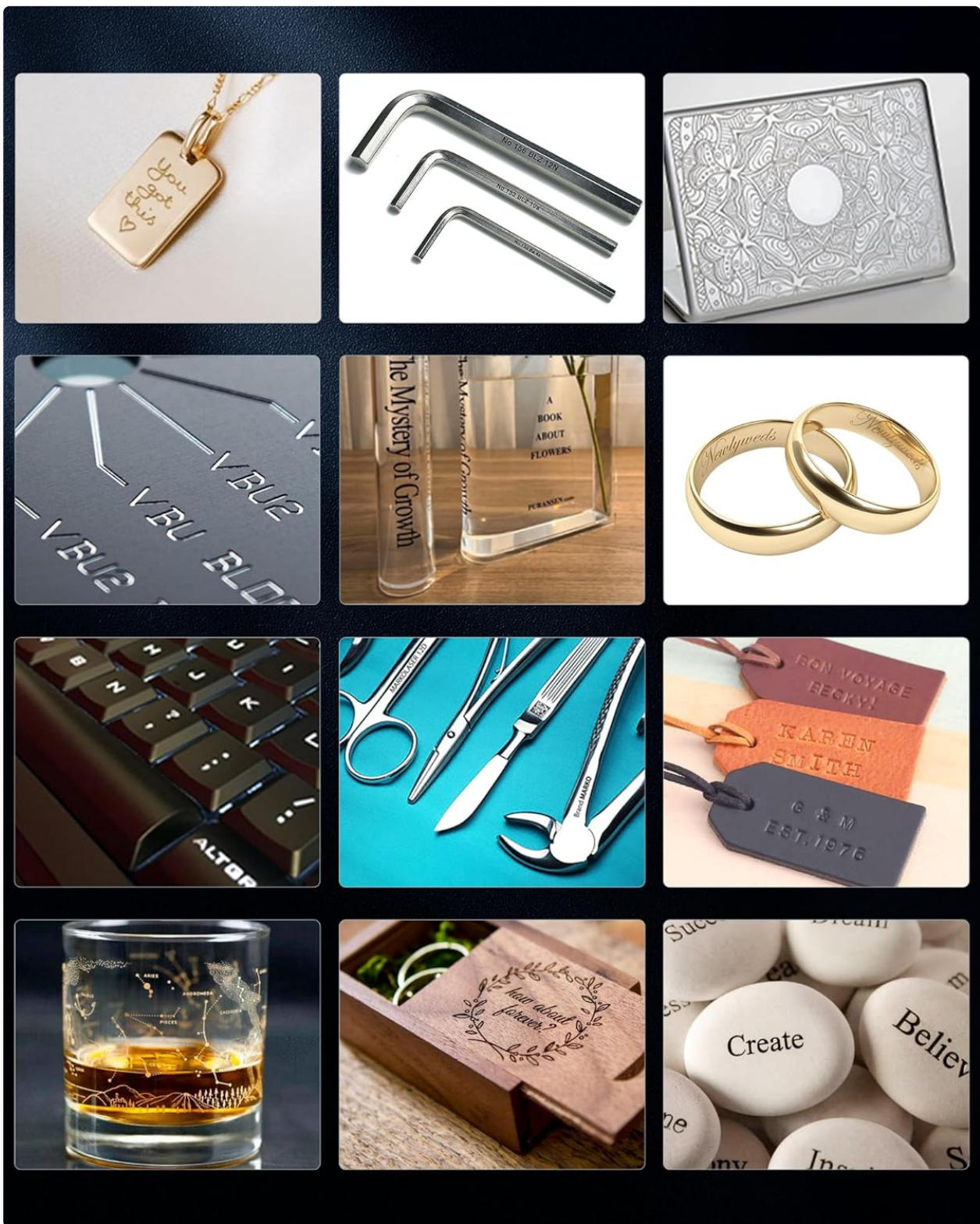- **Non-Metals:** Brick, Granite, Tile, Marble, Stone, Acrylic, Leather, Paper, Plastic, Wood, Glass.

Figure 7: Various materials suitable for engraving with the OMTech 50W Fiber Laser.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your laser engraver.

- **Lens Cleaning:** Periodically clean the laser lens with a specialized lens cleaning solution and cloth to maintain beam quality.
- **Workbed Cleaning:** Keep the workbed clean from debris and residue to prevent interference with engraving and ensure proper material placement.
- **Connection Checks:** Regularly inspect all cables and connections for any signs of wear or looseness.

- **Ventilation System:** Ensure the ventilation system is clear and functioning effectively to extract smoke and particles.

6. TROUBLESHOOTING

This section addresses common issues you might encounter.

6.1 Laser Not Engaging

If the red laser pointer is active but the fiber laser does not engage, check the internal connections. A common issue can be a loose flat control cable from the mainboard to the fiber laser source. If accessible and you are comfortable, carefully open the case and ensure this cable is securely plugged in. If the issue persists or you are unsure, contact customer support.

6.2 Software Connection Issues

If the software (LightBurn or EZCad) fails to connect to the engraver, ensure:

- The engraver is powered on.
- The USB cable is securely connected to both the engraver and the computer.
- The correct drivers are installed on your computer.
- No other software is attempting to communicate with the engraver simultaneously.

7. SPECIFICATIONS

Feature	Specification
Model Number	LYF-60W (Galvo 50W)
Laser Power	50W
Laser Class	2
Output Power	0.874 mW
Work Area	5.9" x 5.9" (150mm x 150mm)
Spot Diameter	0.01 mm
Max. Engraving Speed	10,000 mm/s
Marking Accuracy	±0.001 mm
Max. Single Pass Marking Depth	0.1 mm
Laser Wavelength	1064 nm
Estimated Laser Service Life	100,000+ hours
Compatible Software	LightBurn, EZCad
Supported Image Formats	.bmp, .gif, .jpg, .jpeg, .dxf, .dst, .ai
Rotary Axis Compatibility	Yes
Net Weight	40 lb.

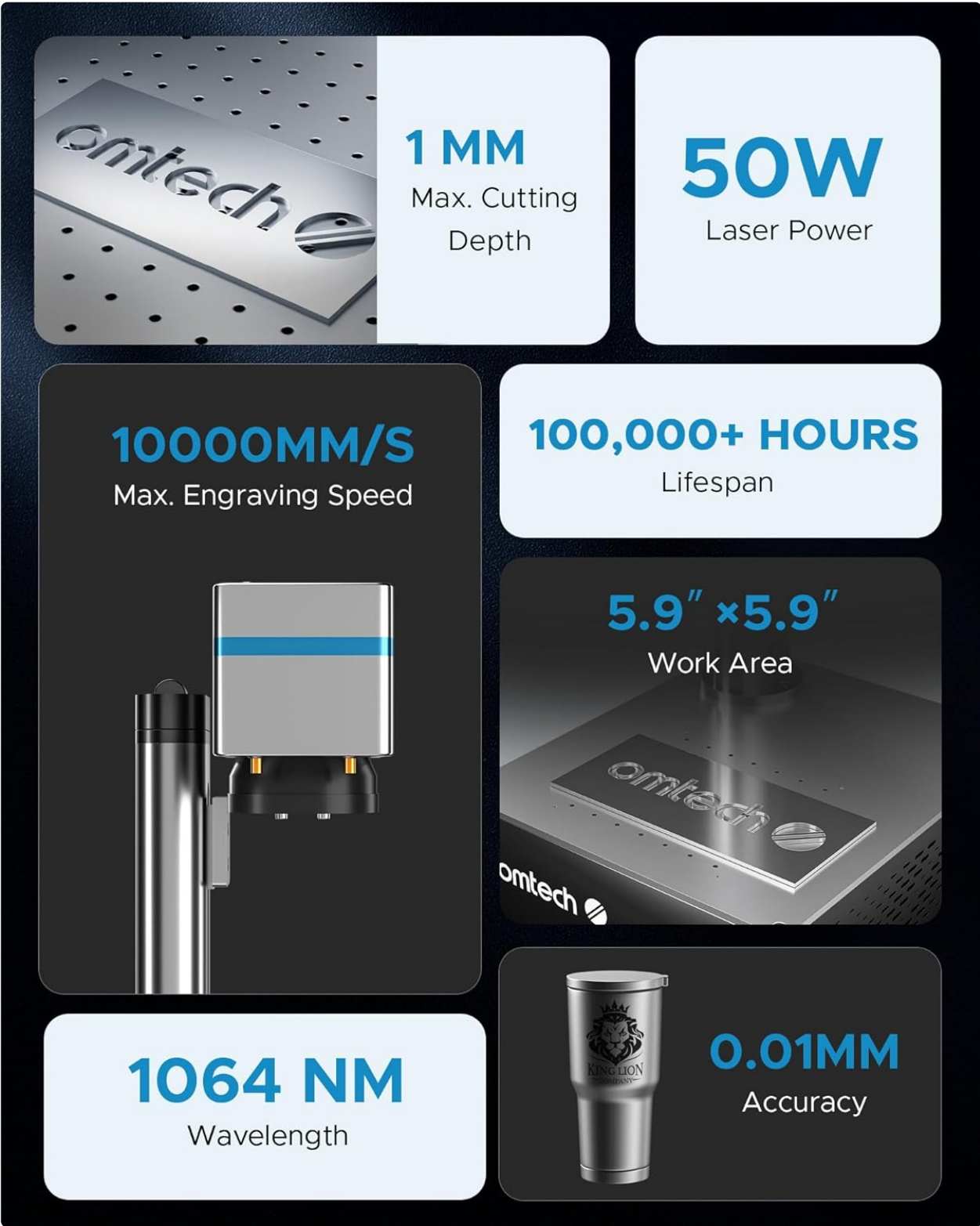|	
Dimensions (L x W x H)	15.8" x 13.4" x 21.3"
Manufacturer	OMTech
Date First Available	July 2, 2024

Figure 8: Overview of key product specifications.

8. WARRANTY AND SUPPORT

OMTech provides comprehensive customer service and support for its products.

- **Warranty:** A 2-year support period is provided for this product.
- **Customer Service:** A 24-hour service team is available in the US, Philippines, and China.
- **Technical Support:** Professional pre-sales and after-sales service, technical support, and on-site experience (by appointment) are offered.

Contact Information:

Phone: +1 (949) 438-4949
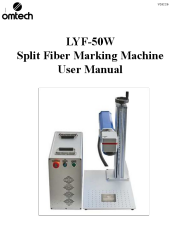
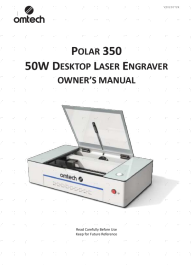**Email Support:** SUPPORT@OMTECHLASER.COM

Email Tech Support: TECHSUPPORT@OMTLASER.COM

9. PRODUCT VIDEOS

No relevant product videos created by the seller were found in the provided data for the OMTech Galvo 50W Fiber Laser Engraver Cutter. The available videos pertain to a different product (WIFI Backup Camera) and have therefore not been embedded.

Related Documents - Galvo 50W

LYF-50W Split Fiber Marking Machine User Manual	[OMTech LYF-50W Split Fiber Marking Machine User Manual](#) Comprehensive user manual for the OMTech LYF-50W Split Fiber Marking Machine, covering installation, operation, safety, maintenance, and troubleshooting.
FM6969-30S Split Fiber Marking Machine User Manual	[OMTech FM6969-30S Split Fiber Marking Machine User Manual](#) This comprehensive user manual provides detailed instructions for the installation, operation, safety, maintenance, and troubleshooting of the OMTech FM6969-30S Split Fiber Marking Machine. Learn about its technical specifications, components, and best practices for engraving various materials.
POLAR 350 50W DESKTOP LASER ENGRAVER OWNER'S MANUAL	[OMTech Polar 350 50W Desktop Laser Engraver Owner's Manual and Guide](#) 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.

	[OMTech Polar 350 50W Desktop Laser Engraver Owner's Manual](#) Comprehensive owner's manual for the OMTech Polar 350 50W Desktop Laser Engraver, covering installation, operation, maintenance, safety, and technical specifications.
	[OMTech Solis Duo Dual Laser Engraver User Manual](#) 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.
	[OMTech Solis Duo Dual Laser Engraver User Manual](#) 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.