

Ortur LU2-10A

Ortur LU2-10A 10000mW Laser Module Instruction Manual

Model: LU2-10A

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Ortur LU2-10A 10000mW Laser Module. Please read these instructions carefully before installation and operation. This laser module is designed for high-precision engraving and cutting with Ortur Laser Engravers.

2. PACKAGE CONTENTS

Verify that all components listed below are present in your package:

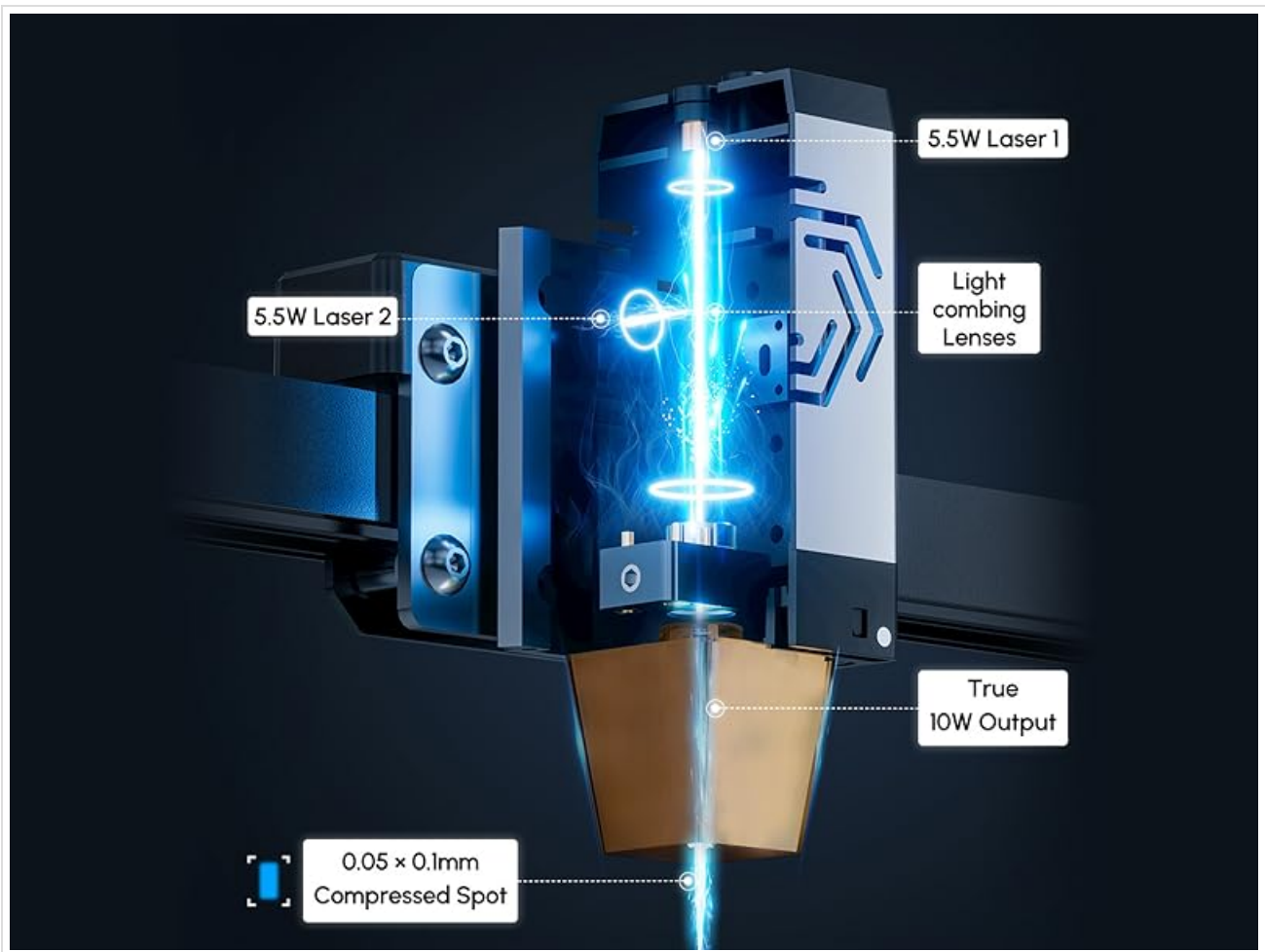


Image: Detailed view of all components included in the Ortur LU2-10A Laser Module package, such as the laser module, laser shield, air assist, various screws, cables, and tools.

- LU2-10A Laser Module
- Laser Shield
- Air Assist
- Support Block
- Slider
- OUC2.0
- Small Coupling
- 24V 2A Power Adapter
- Dedicated LaserWire
- Air Pipe
- Pipe Connector
- Normal Adapter Cable
- Laser Backboard
- M3x5mm Screws*6 (Used for Slider)
- Thumb Screws*2
- M3x8mm Screws*4 (Used for OLM2S2)
- M3x12mm Screws*4 (Used for OLM2)
- Cable Tie*10
- M3 Gasket*1
- Wrench
- Lens

- Air Flow Regulator
- OLM2/S2 OUC Exclusive Adapter Cable

3. SETUP AND INSTALLATION

This section guides you through the assembly and installation of the LU2-10A Laser Module onto your Ortur Laser Engraver. Ensure the engraver is powered off and disconnected from the power source before beginning installation.

3.1. Installation Tutorial Video

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Video: A detailed installation tutorial for the Ortur Laser Master 2 Pro S2 LU2-10A, demonstrating step-by-step assembly and connection procedures.

3.2. Laser Module Installation Steps

1. Attach the laser module to the engraver's carriage.
2. Secure the laser module using the provided thumbscrews.
3. Insert the 5-pin terminal of the dedicated laser line into the laser module's port.
4. Connect the other end of the laser line to the appropriate port on the engraver's control board.
5. Install the laser shield onto the laser module to ensure eye protection during operation.
6. Connect the air assist hose to the air intake port on the laser module and to an external air pump (not included).



Image: The Ortur LU2-10A Laser Module actively cutting a piece of wood, demonstrating its operational capability.

4. OPERATING INSTRUCTIONS

The Ortur LU2-10A Laser Module offers powerful and precise capabilities for various materials.

4.1. Key Features

- **Wide Compatibility:** Compatible with Ortur Laser Master 2, Ortur Laser Master 2 S2, Ortur Laser Master 2Pro S2, and Ortur Laser Master 3 Laser Engravers.
- **Material Versatility:** Engrave and cut acrylic, metal, wood, stainless steel, glass, ceramics, leather, food, paper, fabric, and more.

- **Powerful Output:** True 10000mW laser output for effective cutting and engraving.
- **High Precision:** Compressed spot size of 0.05mm x 0.1mm for detailed work.
- **High Efficiency:** Lightweight design (235g) allows for engraving speeds up to 15000mm/min.
- **Dual Fan Cooling:** Optimized cooling system ensures stable long-term operation without overheating.
- **Stable Operation:** 24V electrical system and high-quality cables support 24 hours of uninterrupted, consistent engraving.

4.2. Engraving and Cutting Capabilities

The LU2-10A module is capable of cutting various materials with significant thickness:

- Up to 30mm acrylic.
- Up to 20mm wood.

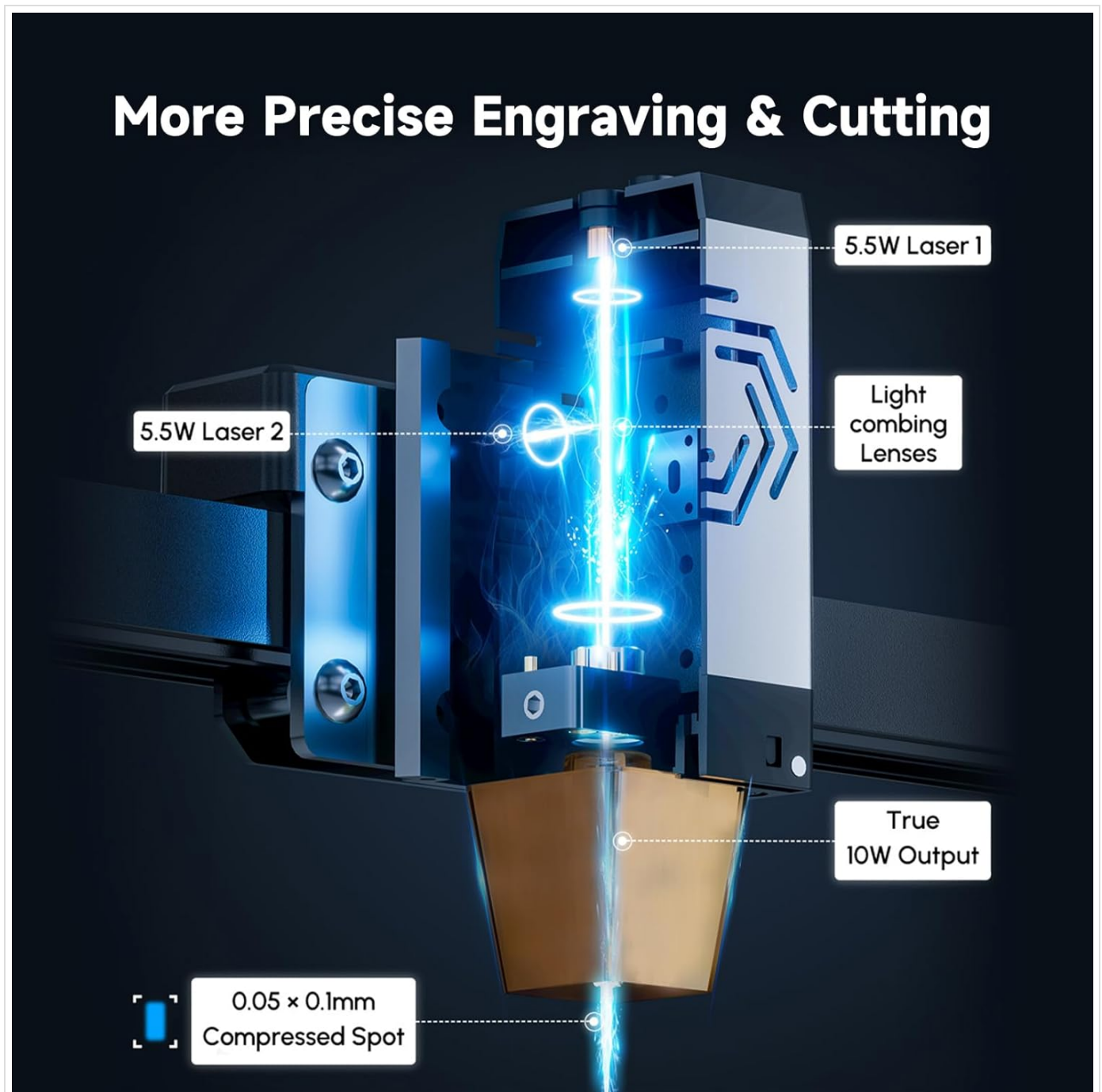


Image: An internal diagram illustrating how two 5.5W laser beams are combined using light combing lenses to achieve a true 10W output with a precise 0.05 x 0.1mm compressed spot.

Speed up to 15,000mm/min

Air intake

Laser module
only 235g



Image: The Ortur LU2-10A Laser Module highlighting its air intake for cooling and its lightweight design (only 235g), contributing to high engraving speeds.

Stable & Lighter 10W Laser Module

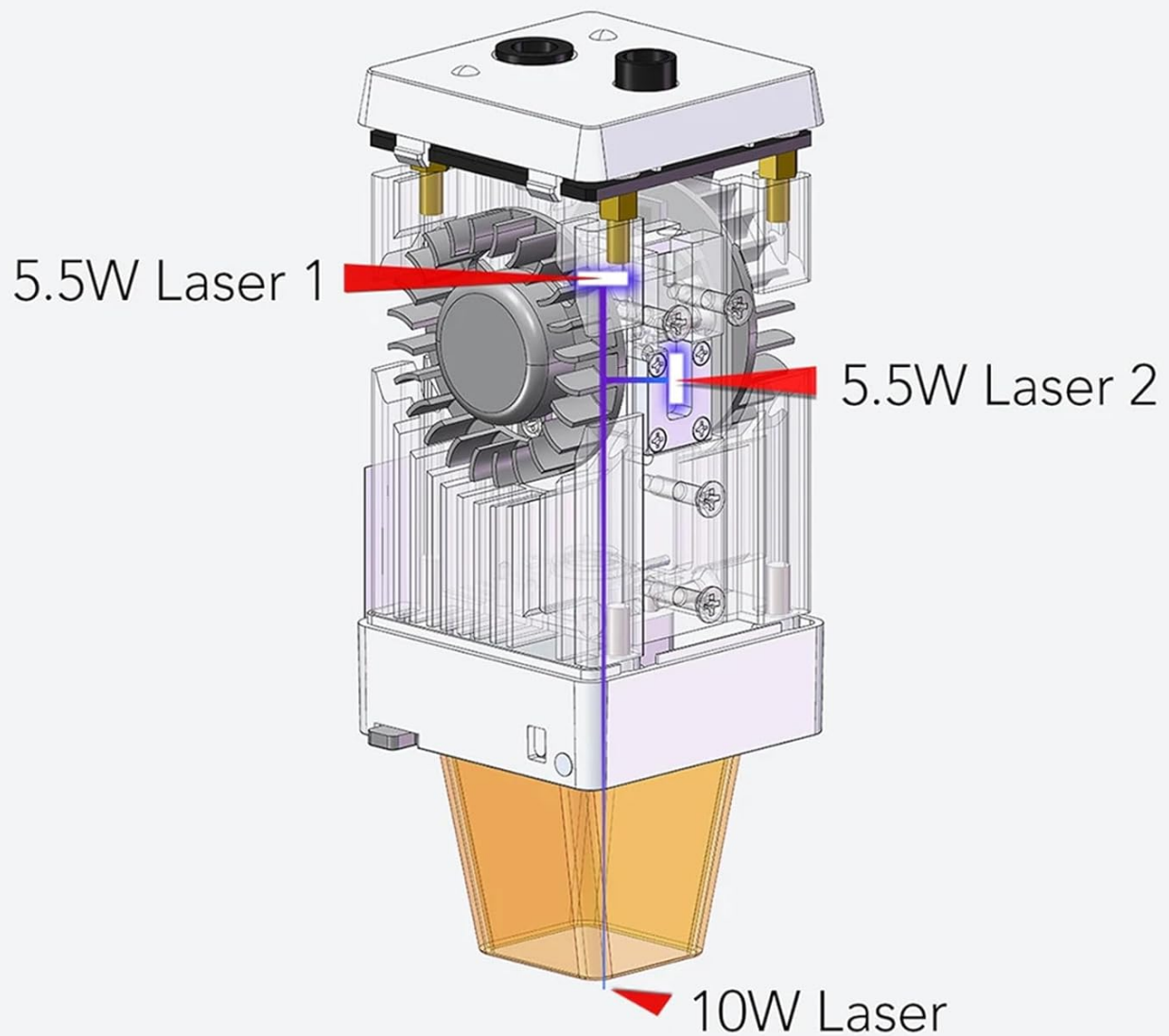


Image: A transparent view of the Ortur LU2-10A Laser Module, showing the internal arrangement of two 5.5W lasers combining to form a single 10W output beam.

Built-in Air Assist



Image: The Ortur LU2-10A Laser Module featuring its built-in air assist system, with an example showing a cleaner cut (labeled "Ours") compared to a cut without air assist (labeled "Other").

0.01mm Extreme Engraving



Image: A visual representation of the laser's compressed spot, showing its dimensions of 0.05mm x 0.1mm, which enables extreme precision in engraving.

5. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your laser module.

- **Lens Cleaning:** Periodically clean the laser lens with a soft, lint-free cloth and appropriate lens cleaning solution to prevent residue buildup that can affect laser performance.
- **Air Assist Nozzle:** Ensure the air assist nozzle is clear of debris to maintain effective airflow during cutting and engraving.
- **Cooling Fans:** Check the dual cooling fans for dust accumulation and clean them gently to ensure proper heat dissipation.
- **Cable Inspection:** Regularly inspect all cables for any signs of wear, damage, or loose connections.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your Ortur LU2-10A Laser Module.

Problem	Possible Cause	Solution
Laser not firing or weak output.	<ul style="list-style-type: none">◦ Loose cable connection.◦ Dirty laser lens.◦ Incorrect power settings in software.◦ Laser module overheating.	<ul style="list-style-type: none">◦ Check all cable connections, especially the 5-pin laser line.◦ Clean the laser lens as per maintenance instructions.◦ Verify laser power and speed settings in your engraving software.◦ Ensure cooling fans are clear and functioning. Allow module to cool if hot.
Inconsistent engraving/cutting results.	<ul style="list-style-type: none">◦ Unstable engraver frame.◦ Loose belts or rollers.◦ Material not flat or secured.◦ Incorrect focus.	<ul style="list-style-type: none">◦ Ensure the engraver frame is stable and all screws are tightened.◦ Check and adjust belt tension and roller tightness.◦ Secure the material firmly to the work surface.◦ Verify the laser focus is correctly set for the material thickness.
Air assist not functioning.	<ul style="list-style-type: none">◦ Blocked air assist nozzle.◦ Loose air hose connection.◦ External air pump issue.	<ul style="list-style-type: none">◦ Clear any debris from the air assist nozzle.◦ Check all air hose connections for tightness.◦ Ensure your external air pump is powered on and functioning correctly.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	4.72 x 1.97 x 1.73 inches
Item Model Number	Ortur-LaserMaster2-ProS2 (LU2-10A variant)
Item Weight	1.54 pounds
Laser Output Power	10000mW (10W)
Compressed Spot Size	0.05mm x 0.1mm
Engraving Speed	Up to 15000mm/min
Cooling System	Dual Fan Cooling
Electrical System	24V
Compatibility	Ortur Laser Master 2, 2 S2, 2Pro S2, 3

8. WARRANTY AND SUPPORT

For warranty information, technical support, or further assistance, please refer to the official Ortur website or contact their customer service directly. Keep your purchase receipt as proof of purchase.
Official Ortur Website: www.ortur.net

