

# LOKLiK iEngrave™

User Manual LEF01

Mode d'emploi de LOKLiK iEngrave™  
Manuale dell'utente di LOKLiK iEngrave™


Manual de Usuario del LOKLiK iEngrave™  
Benutzerhandbuch für LOKLiK iEngrave™

Safety Precautions

1. LOKLiK iEngrave™ uses laser beams to engrave and cut materials. Improper use of the device may result in potential safety hazards, including the risk of fire from the ignition of flammable materials, the release of harmful or irritating fumes, and serious injury to the eyes and skin from direct or reflected laser light;
2. Laser is classified into several categories based on their performance and potential hazards by internationally recognized standards. The LOKLiK iEngrave™ is classified as an FDA Class IV, Class 4 IEC standard device (according to IEC standards and the FDA classification system in the United States);

| Laser Classifications | Hazard  |
|-----------------------|---|
| Class I               | Class I lasers are considered non-hazardous.  |
| Class IIa             | Class IIa lasers are not considered hazardous if the exposure time does not exceed 1x10 <sup>3</sup> seconds; however, prolonged exposure may pose a risk.  |
| Class II              | Class II lasers present a risk with prolonged exposure.   |
| Class IIIa            | Class IIIa lasers may cause acute or prolonged exposure hazards depending on the beam’s intensity. Additionally, direct observation using optical instruments can result in acute exposure hazards. |
| Class IIIb            | Class IIIb lasers pose an acute risk from direct exposure to the skin and eyes.   |
| Class IV              | Class IV lasers pose an acute risk of serious harm to both the skin and eyes from direct or scattered exposure.   |

3. High-energy laser beams can cause severe eye damage, including blindness, as well as deep skin burns;
4. Improper use or modification of safety features increases the risk of eye and skin injury. Please read and follow the instructions of the user manual strictly before use;
5. Please wear safety goggles during the operation;



**Do not look directly at or touch the laser beam.**

**Do not use the LOKLiK iEngrave™ to process reflective materials such as mirrors and glass.**


**Do not use the LOKLiK iEngrave™ when those around you are not equipped with personal protective equipment.**

**Children under 14 must have adult supervision while using the LOKLiK iEngrave™.**

**Keep the pets away from the LOKLiK iEngrave™.**

**Do not modify or disable any safety features of the laser system.**

6. Please use the LOKLiK iEngrave™ in a well-ventilated space; the space should be equipped with a door and curtains to avoid direct exposure to the laser beam and prevent the spread of potentially toxic substances such as smoke, steam, and particulates;



**Do not use materials that are highly flammable, explosive, or release toxic byproducts.**

**Do not take the processed materials out before it is completely cool.**

**Do not leave the device unintended during the operation.**

**Please clean the work surface of any debris, scraps, or flammable items after each use.**

**Please prepare a fire extinguisher in case of fire risk.**

**Do not let the USB cable and power cable touch the laser beam.**

7.Optimal working temperature: 10°C - 30°C; optimal working humidity: 20% - 50%;

8.Please avoid using the hazardous materials listed below. When using unlisted material, please obtain a safety data sheet from the manufacturer;

| Materials                                | Harm  |
|--|---|
| PVC (Polyvinyl Chloride)                 | Releases toxic chlorine gas during laser cutting, which can damage the device's components.                     |
| Lexan (Polycarbonate)                    | Produces poor cutting results, is highly flammable, and absorbs infrared radiation, making cutting inefficient. |
| ABS<br>(Acrylonitrile Butadiene Styrene) | Melts under laser exposure, leaving blurred patterns and sticky residue.  |
| HDPE<br>(High-Density Polyethylene)      | Prone to melting and catching fire when exposed to the laser.   |
| Polystyrene Foam                         | Thin sheets can be cut but are highly flammable and tend to melt.   |
| Fiberglass                               | Contains epoxy resin, which releases toxic fumes during engraving.  |
| Polypropylene                            | Melts easily and burns continuously, forming pebble-like droplets that solidify on the surface.                 |
| Coated Carbon Fiber                      | Emits toxic fumes and tends to fray during cutting; cannot be cut when coated.                                  |

9.Power Usage Guidelines:

- Do not use a power adapter with a different voltage output(Required voltage: 24V);
- When replacing the power adapter, please use the one with 24V output and a minimum current rating of 2.5 Amps;
- It is normal for a slight spark to occur when connecting the adapter plug to the mainboard. For better safety, you can connect the plug to the main board first before plugging in the power adapter.

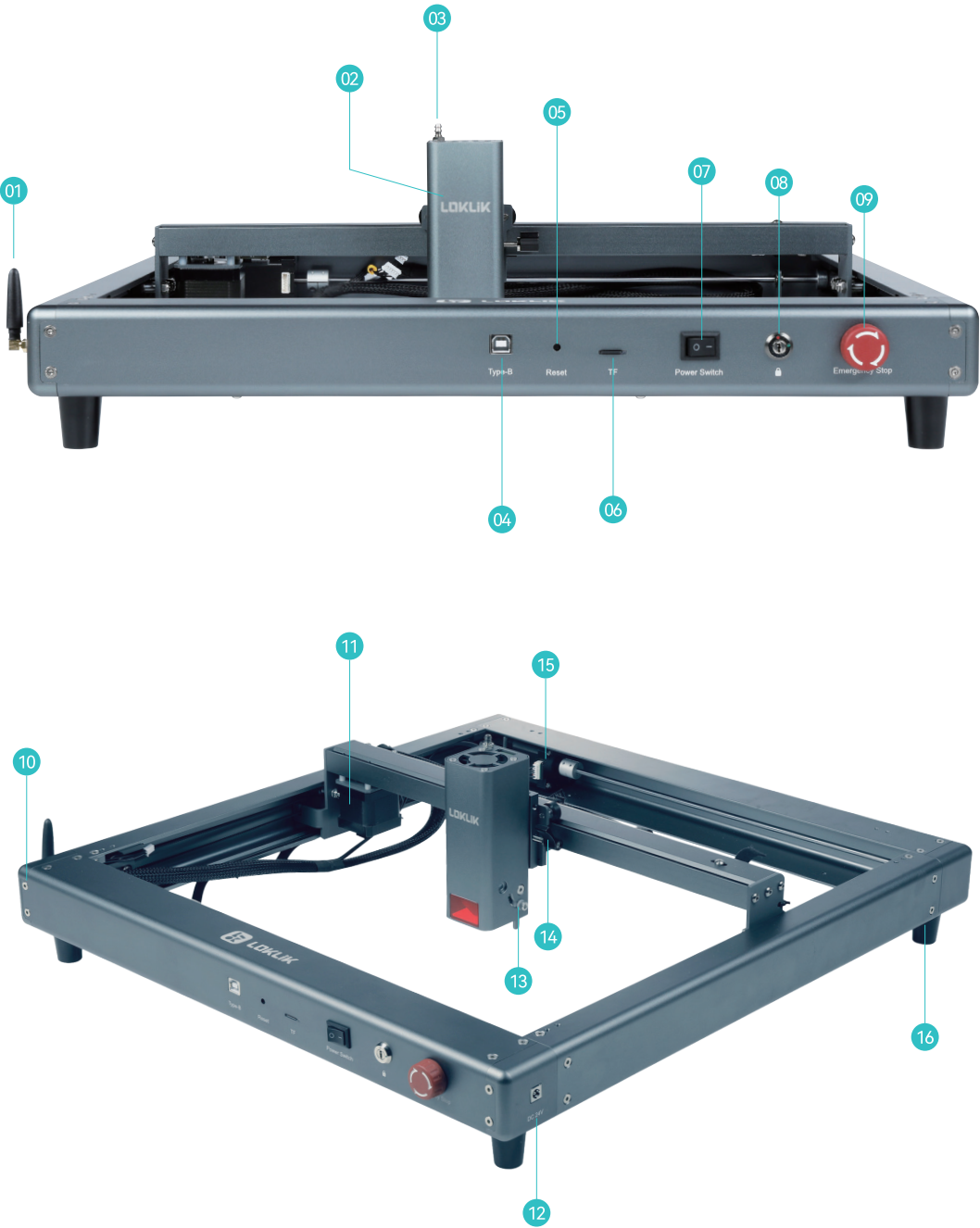
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Specifications

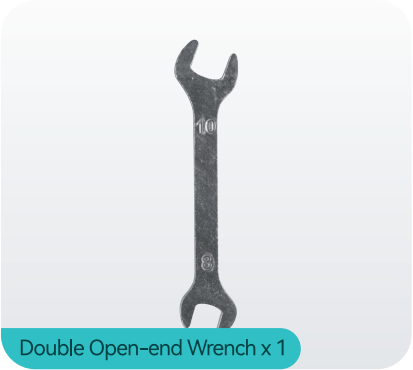
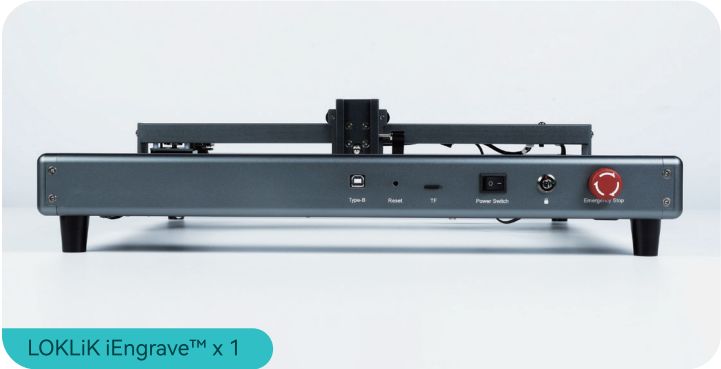
| Product                             | LOKLiK iEngrave™  |
|-------------------------------------|---|
| Model                               | LOKLiK iEngrave™ LEF02  |
| Engraving Area                      | 300 x 300 mm/ 11.81 x 11.81 in  |
| Maximum Engraving Speed             | 30000 mm/min  |
| Power Adapter Input （AC）            | 110 - 240 V, 50 - 60 Hz   |
| Power Adapter Output （DC）           | 24V 2.5A  |
| Maximum Power Rate of Power Adapter | 60 W  |
| Product Dimensions                  | 565 × 532 × 147 mm  |
| Package Weight                      | 4 kg  |
| Package Dimensions                  | 610 × 570 × 184 mm  |
| Package Weight                      | 6.8 kg  |
| Operating Ambient Temp              | 0-35°C  |
| Laser Module                        |   |
| Laser Module Model                  | LEF01 10W   |
| Laser Technology                    | Diode Laser   |
| Wave Length                         | 450 - 460 nm  |
| Input                               | 24 V 1.5A   |
| Laser Head Power Range              | 10 - 11 W   |
| Laser Head Height Adjustment        | 50 mm   |
| Spot Size                           | 0.06 x 0.06 mm  |
| Safety Classification               | FDA Class IV or Class 4 IEC standard  |
| Applicable Material                 | Engraving: plywood, rough wood, hardwood, pine wood, acrylic, kraft paper, stainless steel, aluminum alloy, ceramic, etc.<br>Cutting: poplar, pine wood, acrylic plate, bamboo, paper, etc. |
| Software                            |   |
| Software                            | Laser GRBL, LightBurn<br>LOKLiK APP   |
| Support System                      | Laser GRBL: Windows<br>LightBurn: Windows, Mac OS, Linux  |
| Support File                        | JPG, PNG, BMP, GIF, SVG, AI, etc.<br>LOKLiK APP only supports JPG, PNG, SVG   |
| Connection                          | USB, Micro SD Card, WiFi  |

Product Overview



|                 |                       |                          |                              |
|-----------------|-----------------------|--------------------------|------------------------------|
| 1. WiFi Module  | 5. Reset Button       | 9. Emergency Stop Button | 13. Focal Length Setting Pin |
| 2. Laser Module | 6. Micro SD Card Slot | 10. Air Pump Port        | 14. Laser Height Screw       |
| 3. Air Inlet    | 7. Power Switch       | 11. X-axis Motor         | 15. Y-axis Motor             |
| 4. USB Port     | 8. Safety Lock        | 12. Power Port           | 16. Support Foot             |

Included in The Box

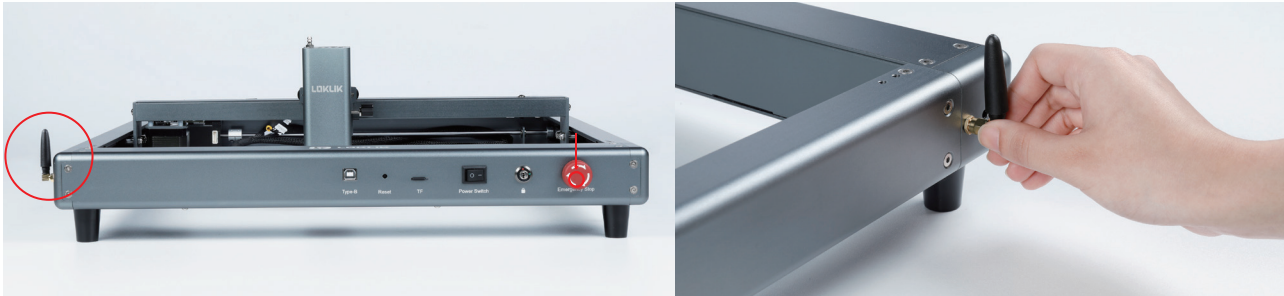




# LOKLiK iEngrave™ Installation

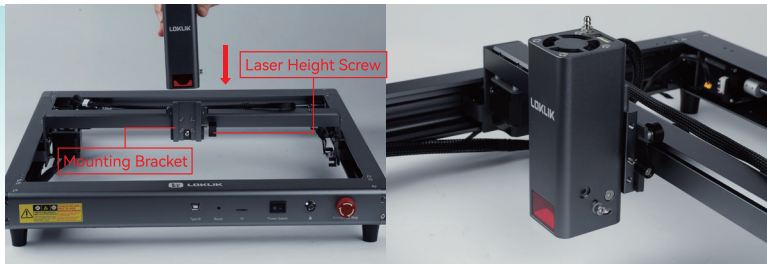
## Step 1: Install WiFi Module

Keep the WiFi module upward and screw the WiFi module in to secure its position;

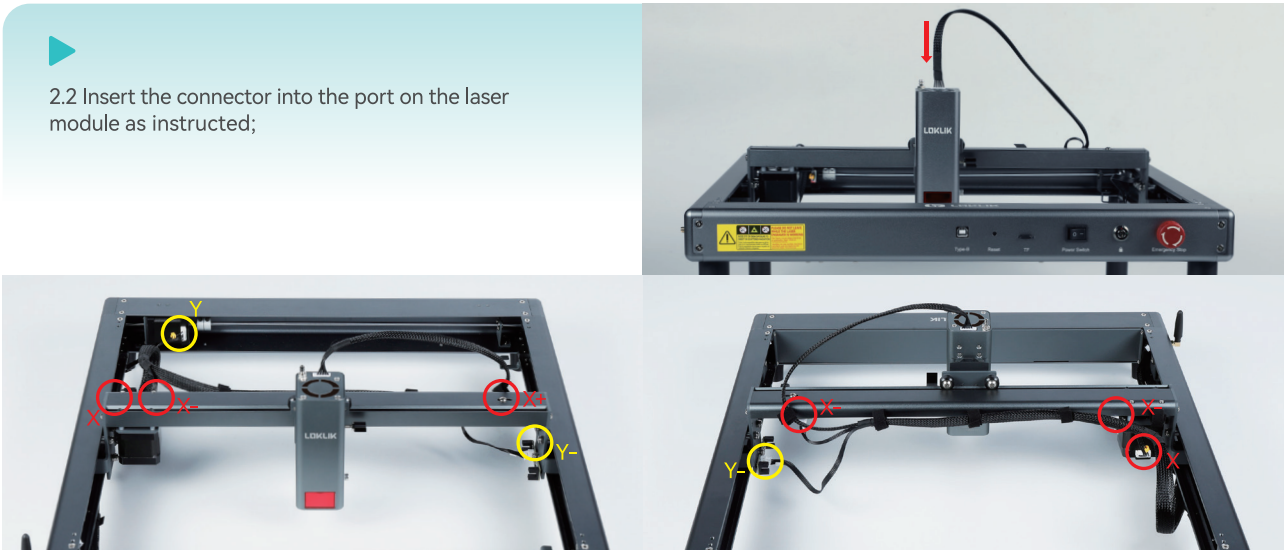


## Step 2: Install Laser Module

2.1 Keep the laser module upright and slide it into the mounting bracket; once the module is in place, tighten the thumb screw to fix its position;



2.2 Insert the connector into the port on the laser module as instructed;



## Step 3: Safety Lock & Emergency Stop Button

To better enhance user safety, the LOKLiK iEngrave™ is designed with a safety lock and emergency stop button. Before powering on the device, please turn on the emergency stop button, safety lock and the power switch. Otherwise, the device will not power on.

3.1 Emergency Stop Button: Rotate the emergency stop switch clockwise to release it. Do not turn it counter-clockwise to avoid damage;

3.2 Safety Lock: Before using the LEF01, insert the key into the child lock and turn it 90 degrees clockwise until it points to the green dot. Do not turn it counterclockwise to avoid damage;



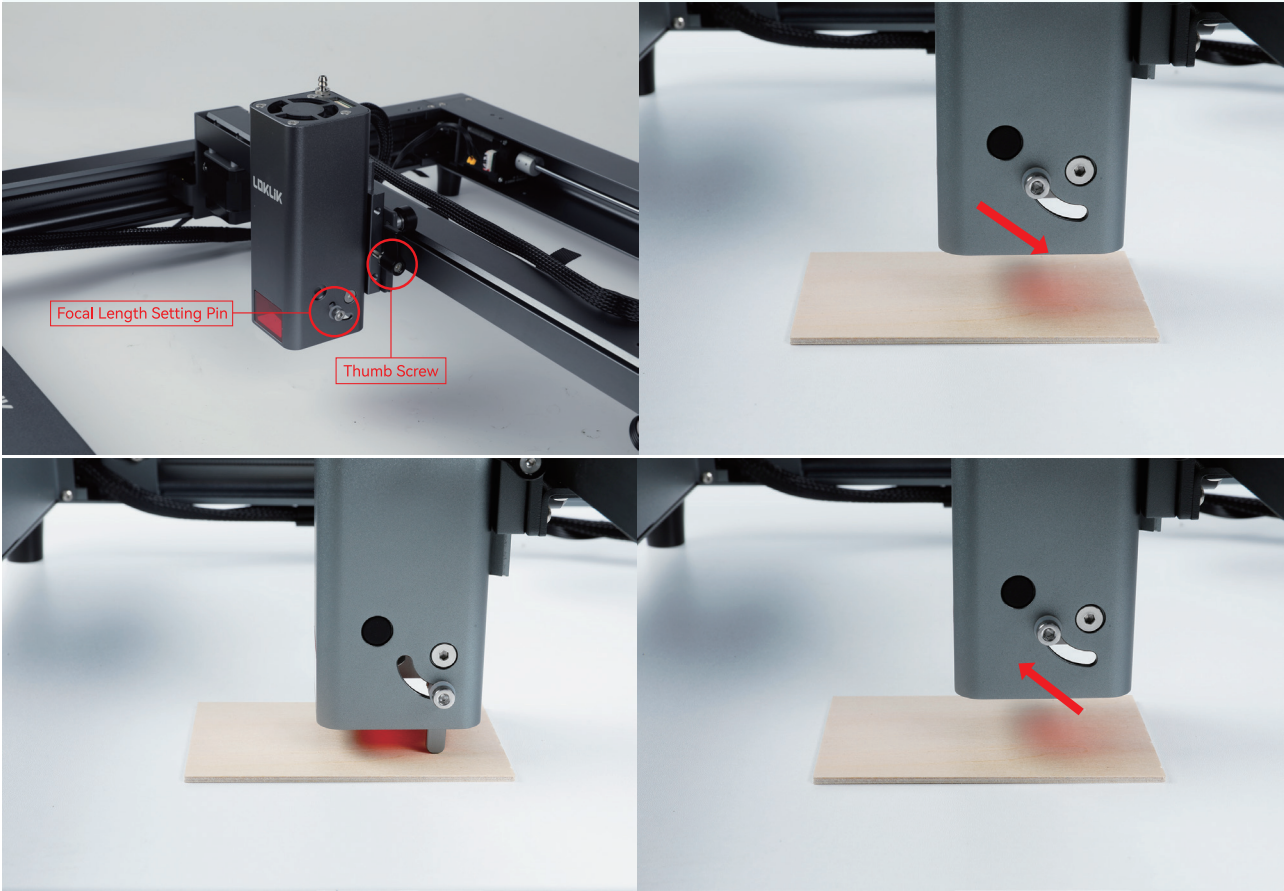
3.3 Power On: Connect the power adapter and power cable. Use a USB cable to connect your computer to LOKLiK iEngrave™. Press the power switch (○ = off, — = on) to turn it on.

### Note:

The device can only start when the power switch, emergency stop button, and safety lock are all turned on. After powering on, the device will beep once. To shut it down, simply press the power switch.

## Step 4: Adjust Focal Length

Place the material, slide the focal length setting pin down, loosen the thumb screw, and slide the laser module upward or downward until the pin tip touches the material surface. Then tighten the thumb screw and slide the focal length setting pin back;



## Software Installation

Download LOKLiK: <https://store.loklik.com/download>

More Instructions about Software Usage:

<https://store.loklik.com/app-help>

For Any Questions, Please Visit Our Official Website: [www.loklik.com](http://www.loklik.com)

Download QR Code:





## LightBurn Installation

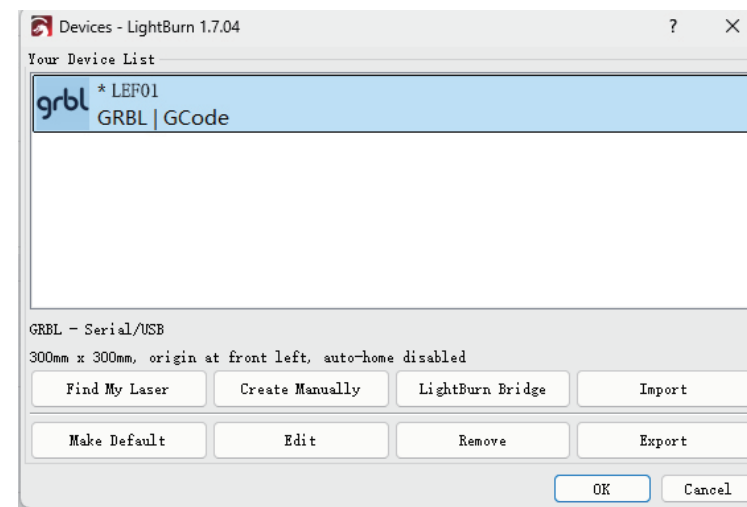
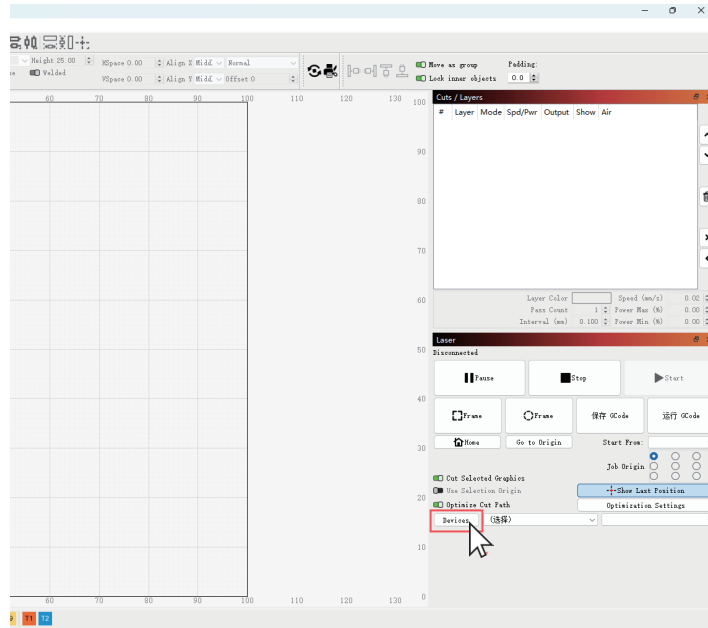
LightBurn is a professional laser engraving software that runs on Windows, Mac OS, and Linux. It offers a trial period, and if you are interested after the trial, you can pay for it. LightBurn: LightBurn: Insert the enclosed Micro SD card into the computer and find the LightBurn software in the folder(path: /software) or you can download the LightBurn through this link: <https://lightburnsoftware.com/download/>.

**Step 1** Find the "CH340" folder in the enclosed Micro SD card and install the driver based on your computer system.

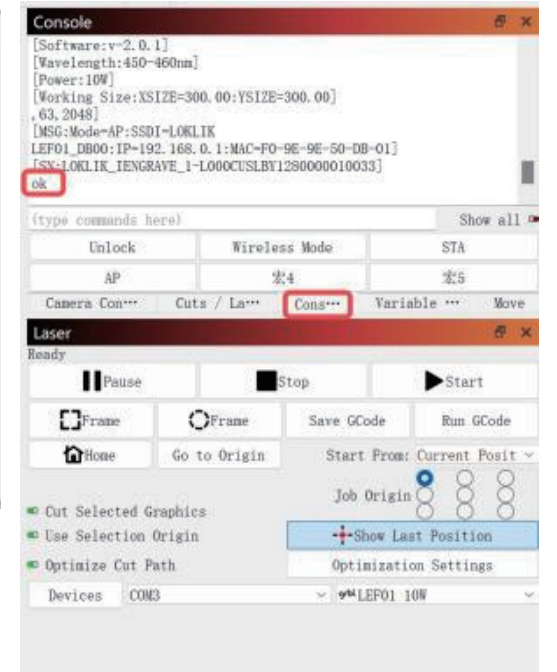
**Step 2** After installation, power on the device and connect it to the computer via a USB cable;

**Step 3** Open LightBurn on the computer - click "Device" to open "Your Device List";

**Step 4** Click "Import" on the pop-up window - Find the "LEF01.ibdev" file and click "Open";



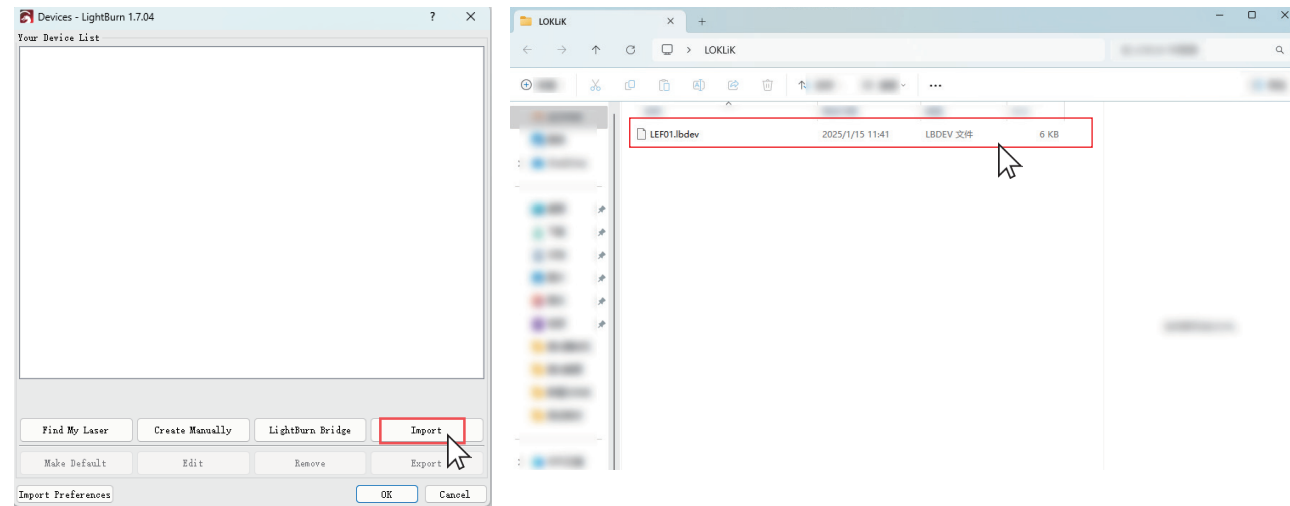
**Step 5** Select "LEF01" and click "OK" to import the configuration.



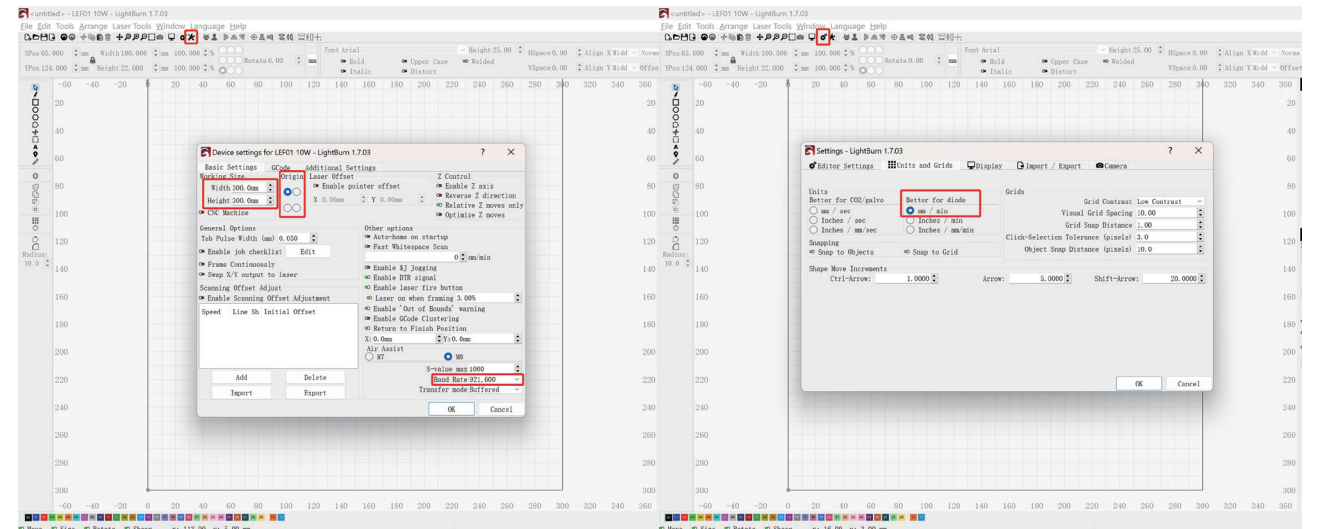
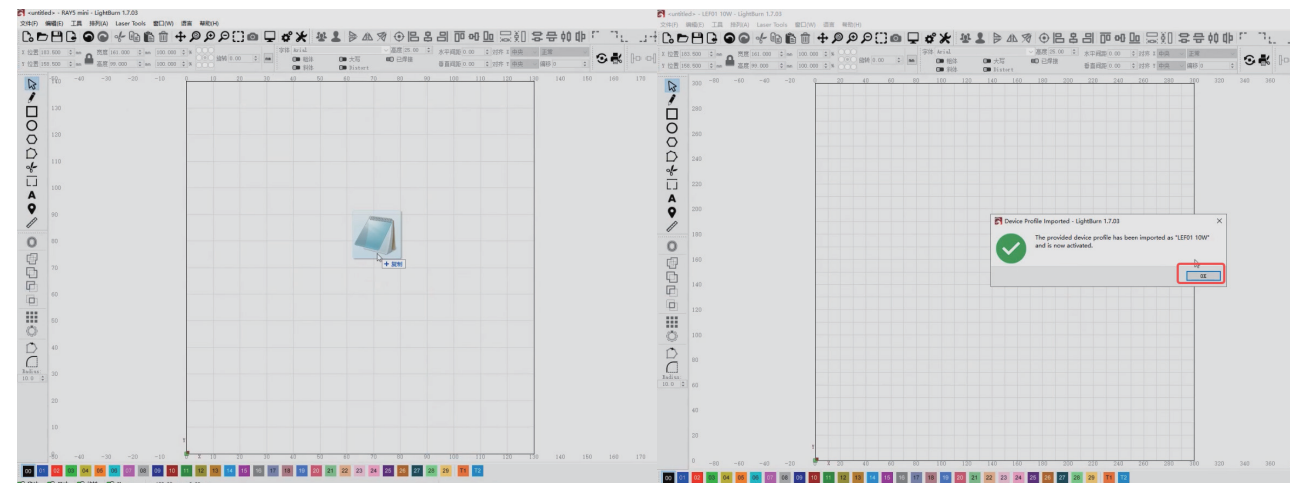
## LightBurn Instruction

**Step 1** Set up "Origin": Click the "Setup" icon as instructed in the following picture - activate "Origin" - "OK"

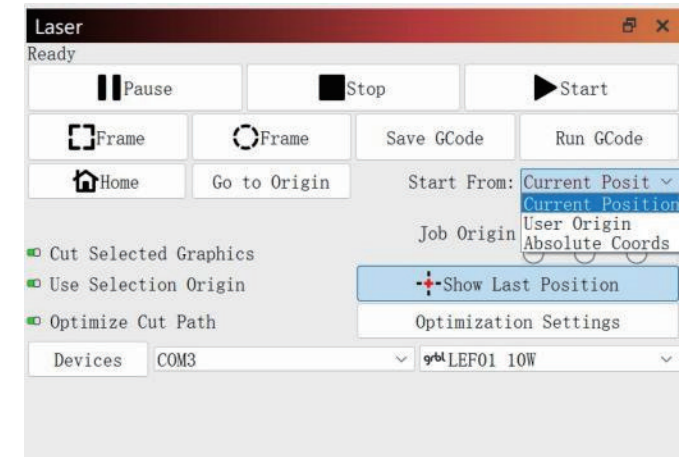
**Step 2** Set up Parameters: Set up the device parameters, including working size, baud rate, and speed, as instructed in the following pictures;

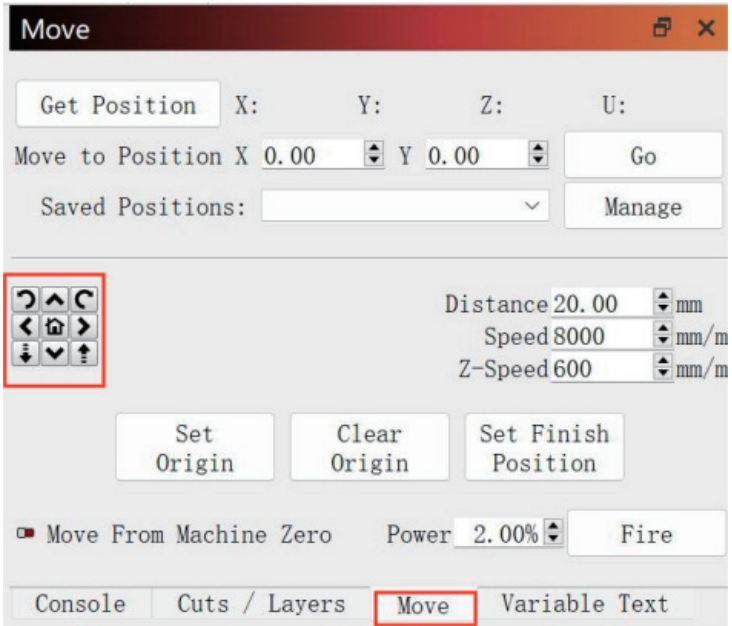


**Notes:** If you cannot find the "LEF01.ibdev" file in the pop-up window. You can find this file in the enclosed Micro SD card and drag it into the window directly.



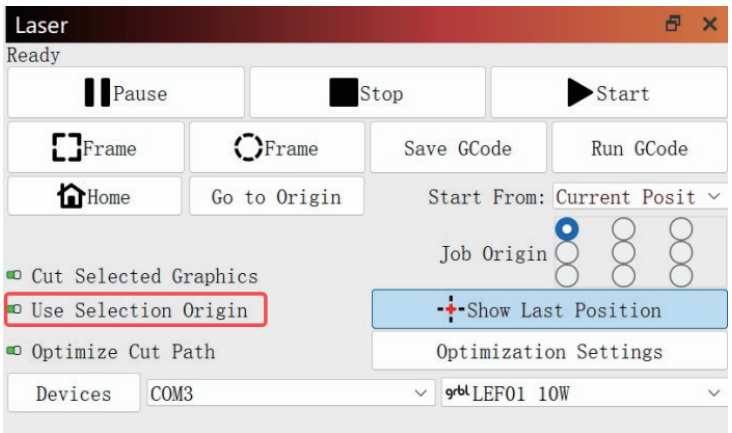
**Step 3** Select "Start" mode: LightBurn has three different Start modes - User Origin, Current Position, and Absolute Coordinates.





**Recommended Modes:**

Absolute Coordinate: Use the “Move” module in the software to move the laser module when the laser cover is closed.



**Current Position:**

Activate the “Use Selection Origin” and move the laser module by hand.

**Note: Please activate the “Cut Selected Graphics” when using the above two modes.**

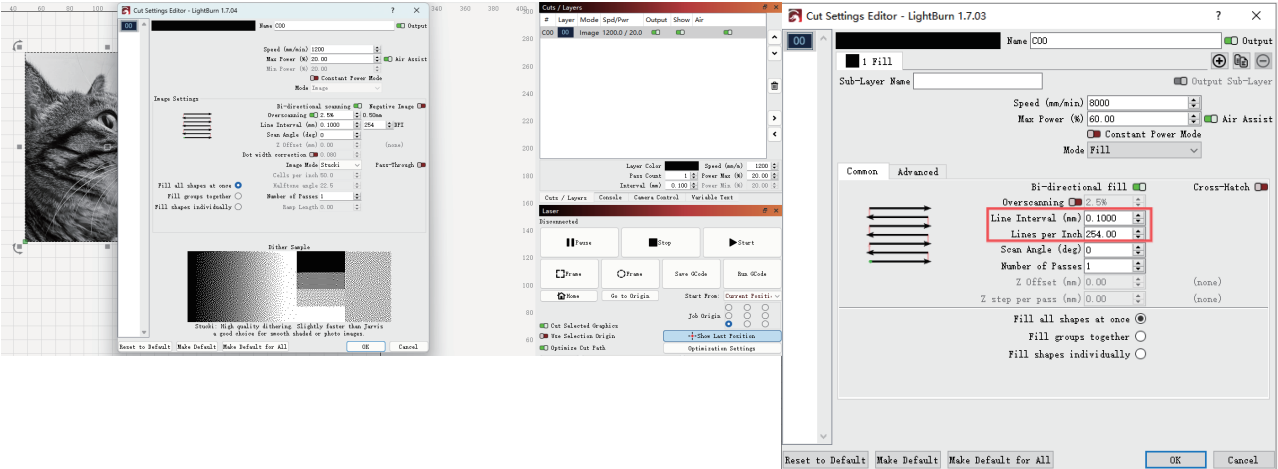
**Step 4** Click Menu "File" –"Import image from disk." Or just use the draw tool on the left column to design your own pattern;

**Step 5** Set up the name, speed, max power, mode, and other parameters on the Cuts/Layers page;

**Note:**

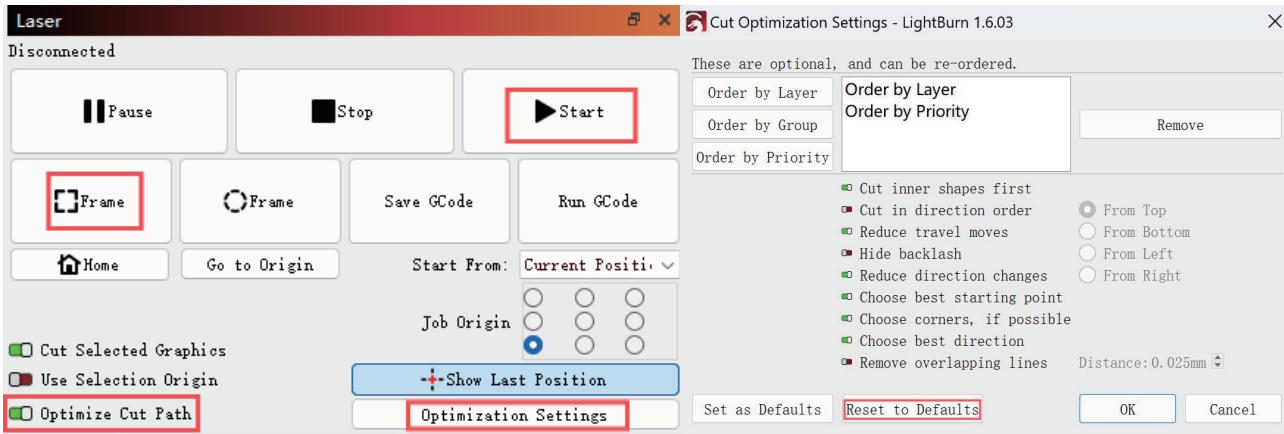
The cutting and engraving parameters only differ in speed and power. You can refer to the "LOKLiK iEngrave™ Quick Reference Chart" in the enclosed Micro SD card for more recommending parameters.

When engraving in "Fill" mode, it is recommended to set the Line Interval as 0.1 mm and the "Line per Inch" as 254 for optimal results.



**Step 6** Put the material under the laser module and adjust the focal length;

**Step 7** click "Frame" to preview the engraving path and ensure the engraving path is within the material border – click "Start" to begin engraving(Note: Please activate the "Optimize Cut Path" and click "Optimization Settings" – "Reset to Defaults" before starting engraving for optimal result.).



For more info about LightBurn, please visit: <https://lightburnsoftware.com/pages/tutorials>

## Laser GRBL Installation

Laser GRBL is a free and professional laser engraving software that runs on Windows.

**Step 1** Step 1: Insert the enclosed Micro SD card into the computer and find the Laser GRBL software in the folder (path: /software),

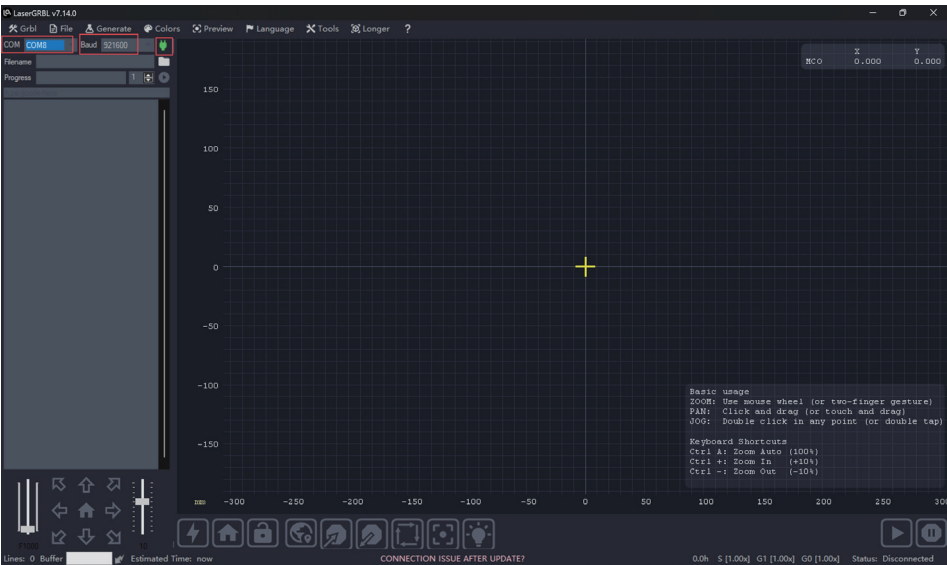
or you can download the Laser GRBL through this link: <https://lasergrbl.com/download/>;

**Step 2** After installation, power on the LOKLiK iEngrave™ and connect it to the computer via USB cable;

**Step 3** Open Laser GRBL, select the correct port – set up the baud rate at 921600 – click "connect" (if you cannot find the correct port, click "Menu" – "Tools" – "Install CH340 Driver" to install the CH340 driver manually).

## Laser GRBL Instruction

**1** Software interface;

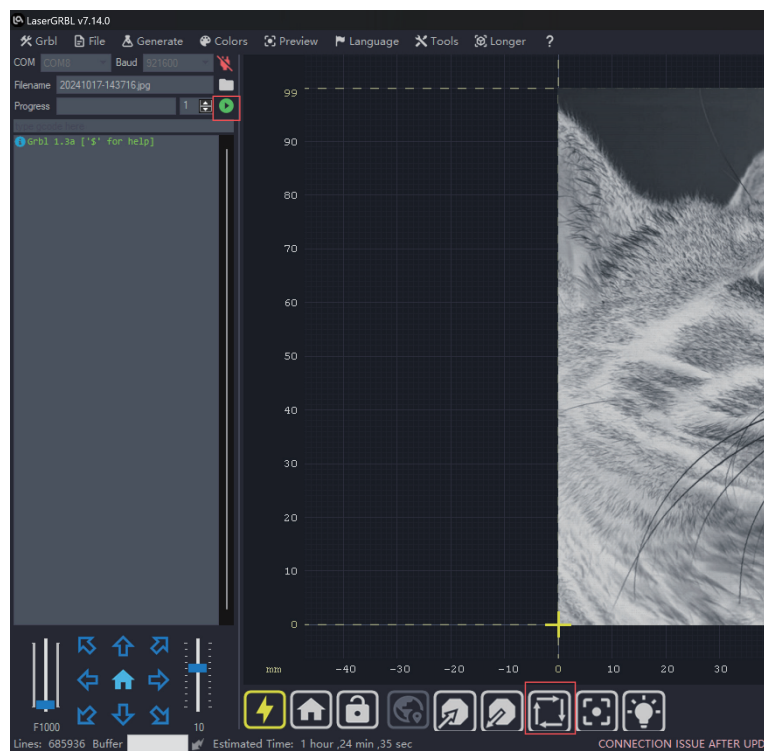
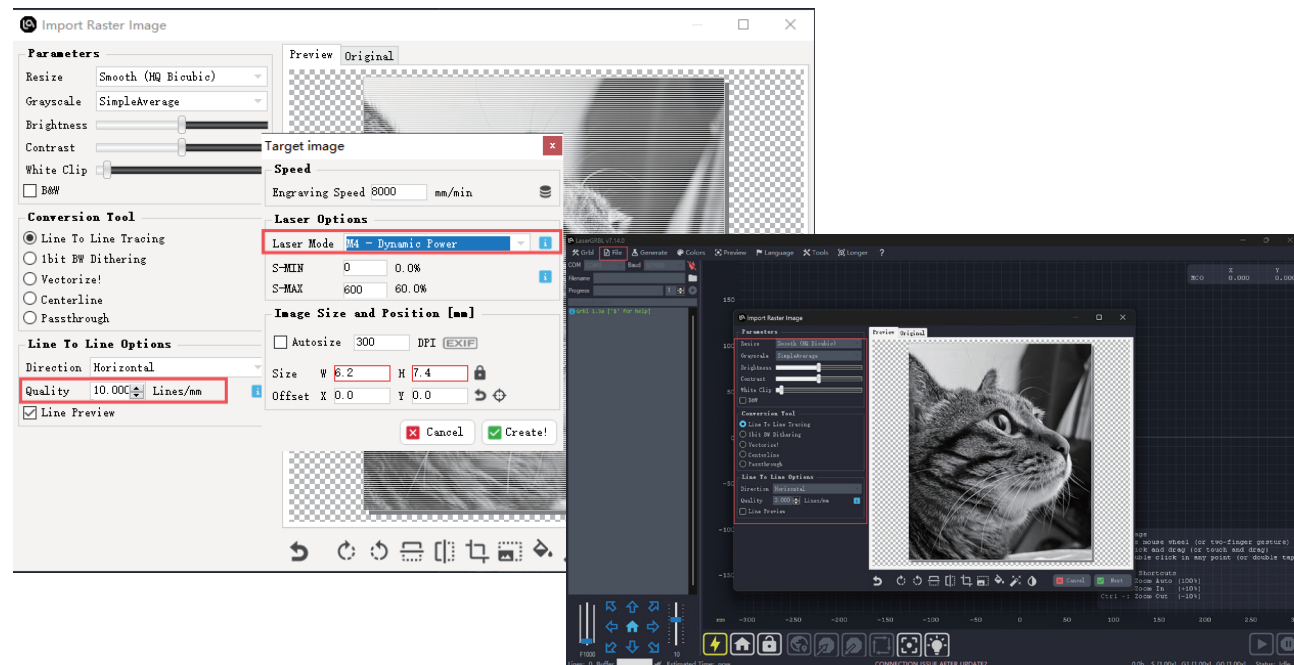




2

Click "File" and set up "Engraving Speed" and power rate in "S-Max." For more engraving or cutting parameters, please refer to the "Quick Reference Chart" on the Micro SD card or the last page of this user manual.

**Note: Set up the "Laser mode" as M4-Dynamic Power; when engraving in "Fill" mode, set up the "Quality" value as 10 (Note: The imported image size should not exceed 300 × 300 mm);**



3

Put the material under the laser module and adjust the laser head height – click "Frame" to preview the engraving path and ensure the path is within the material border – click "Start" to engrave.

For more info about Laser GRBL, please visit:  
<https://lasergrbl.com/usage/>.

## FAQs

**Q1: Where can I find the recommended cutting and engraving parameters?**

A1: You can refer to the "LOKLiK iEngrave™ Quick Reference Chart" in the enclosed TF card for more parameters.

**Q2: What to do when the engraving pattern appears uneven or with breaks?**

A1: You can visit <https://store.loklik.com/app-help> for solution.

**Q3: What to do when I encounter software problems during the cutting or engraving?**

A1: For Laser GRBL users, please visit <https://lasergrbl.com/faq/> for solutions;

A2: For LightBurn users, please visit

<https://docs.lightburnsoftware.com/latest/Troubleshooting/> for solutions.

**Q4: How to update firmware?**

A1: You can visit (<https://store.loklik.com/app-help/detail?id=1892093750240907266>) for detailed update instructions.

**Q5: How to maintain the laser module?**

A1: The laser module will be contaminated after long use. To achieve the optimal cutting and engraving results, please follow the instructions below and maintain the module on a regular basis.

You will need: Allen Wrench, Non-woven Cloth, Alcohol or Isopropyl Alcohol Solution.

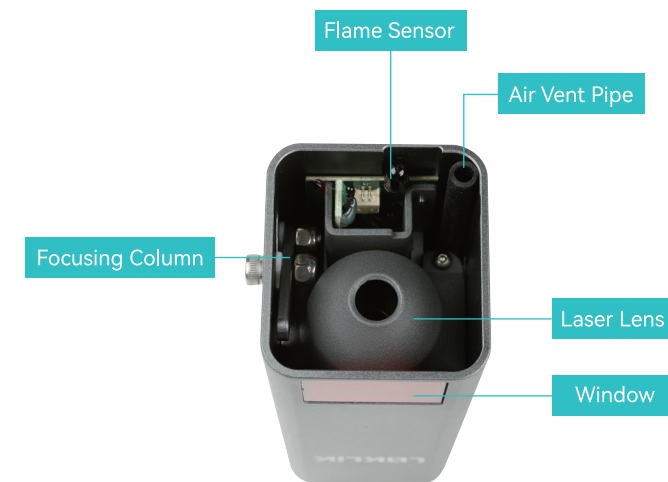
**Step 1:** Remove the laser window and air vent pipe;

**Step 2:** Dip a non-woven cloth in a small amount of alcohol or isopropyl alcohol solution(Note: Ensure the non-woven cloth is not too wet in case the excess liquid seeps into the laser module and damages the module);

**Step 3:** Use the non-woven cloth to clean the laser lens gently;

**Step 4:** Reassemble the laser window and air vent pipe back.

## Laser Module Diagram



**Q6: What to do if LightBurn or Laser GRBL cannot detect the device when connected via USB?**

**Step 1:** Ensure the baud rate is set to 921600 in LightBurn or Laser GRBL;

**Step 2:** You need to manually install the CH340 driver if your computer operates on old Windows or macOS. You can check the installation video on the attached Micro SD card or visit <https://store.loklik.com/app-help> for detailed instructions;

**Step 3:** If none of the above steps work, please contact LOKLiK customer service for further assistance.



Limited Warranty

This product is covered by a one-year warranty from the date of purchase. If a defect occurs under normal use within the warranty period, we will provide warranty service. Proof of purchase is required to claim warranty service. LOKLiK accessories are covered by a free warranty for three months from the date of purchase. In the event that any warranty terms conflict with applicable local laws and regulations, the local laws will take precedence.

To the extent permitted by applicable laws, LOKLiK is not responsible for the warranty in the following situations: malfunctions caused by improper use, maintenance, and storage by consumers; malfunctions caused by self-repair or dismantling by those who do not undertake the three-guarantee repair without the permission of our company; products that can continue to be used after repair when the warranty expired; damage caused by force majeure. Meanwhile, LOKLiK disclaims all implied and legal warranties, including warranties of merchantability and fitness for a particular purpose. The warranties that are allowed to be denied are for the duration of this warranty.

Proof of purchase may be required to verify warranty eligibility.

| Material                  | Action  | Thickness | Power in LightBurn | Power in LaserGRBL | Speed mm/min | Cycles | Remarks  |
|---------------------------|---------|-----------|--------------------|--------------------|--------------|--------|--|
| Basswood                  | Engrave | -         | 75%                | 750                | 7500         | 1      |  |
| Hardwood                  | Engrave | -         | 75%                | 750                | 7500         | 1      |  |
| Medium Density Fiberboard | Engrave | -         | 75%                | 750                | 7500         | 1      |  |
| Black Anodised Aluminium  | Engrave | -         | 60%                | 600                | 7500         | 1      |  |
| Leather                   | Engrave | -         | 40%                | 400                | 8000         | 1      |  |
| Black Acrylic             | Engrave | -         | 50%                | 500                | 8000         | 1      |  |
| Stone                     | Engrave | -         | 50%                | 500                | 8000         | 1      |  |
| Carton                    | Engrave | -         | 60%                | 600                | 6500         | 1      |  |
| Cardstock Paper           | Engrave | -         | 50%                | 500                | 8000         | 1      |  |
| Denim                     | Engrave | -         | 60%                | 600                | 8000         | 1      |  |
| Kraft Paper               | Engrave | -         | 40%                | 400                | 7500         | 1      |  |
| Pearl Paper               | Engrave | -         | 70%                | 700                | 8000         | 1      |  |
| Bamboo                    | Engrave | -         | 50%                | 500                | 5000         | 1      |  |
| Ceramic                   | Engrave | -         | 60%                | 600                | 1500         | 1      | Paint the surface black or apply black colored paper |
| Glass                     | Engrave | -         | 70%                | 700                | 1000         | 1      | Paint the surface black or apply black colored paper |
| Stainless Steel           | Engrave | -         | 90%                | 900                | 2000         | 1      |  |
| Basswood                  | Cut     | 2 mm      | 100%               | 1000               | 300          | 1      |  |
| Basswood                  | Cut     | 3 mm      | 100%               | 1000               | 230          | 1      |  |
| Basswood                  | Cut     | 4 mm      | 100%               | 1000               | 150          | 1      |  |
| Basswood                  | Cut     | 8 mm      | 100%               | 1000               | 100          | 1      | Defoucs by 3 mm.                                     |
| Basswood                  | Cut     | 10 mm     | 100%               | 1000               | 200          | 4      | Defoucs by 3 mm.                                     |
| Pinewood                  | Cut     | 10 mm     | 100%               | 1000               | 200          | 2      | Defoucs by 3 mm.                                     |
| Pinewood                  | Cut     | 12 mm     | 100%               | 1000               | 150          | 2      | Defoucs by 3 mm.                                     |
| Acrylic                   | Cut     | 3 mm      | 100%               | 1000               | 140          | 2      |  |
| Kraft Paper               | Cut     | 0.1 mm    | 100%               | 1000               | 8000         | 1      |  |
| Leather                   | Cut     | 1 mm      | 100%               | 1000               | 900          | 1      |  |
| Denim                     | Cut     | 0.5 mm    | 100%               | 1000               | 300          | 1      |  |