




LASER TREE LT-4LDS-V1 20W Optical Power Laser Module User Manual

[Home](#) » [LASER TREE](#) » LASER TREE LT-4LDS-V1 20W Optical Power Laser Module User Manual 

Contents

- [1 LASER TREE LT-4LDS-V1 20W Optical Power Laser Module](#)
- [2 LASER MODULE INTRODUCTION](#)
- [3 LASER MODULE CONNECTION DESCRIPTION](#)
- [4 LASER MODULE REFERENCE SETTINGS](#)
- [5 PRECAUTIONS AND MAINTENANCE](#)
- [6 Documents / Resources](#)
- [7 Related Posts](#)



LASER TREE LT-4LDS-V1 20W Optical Power Laser Module

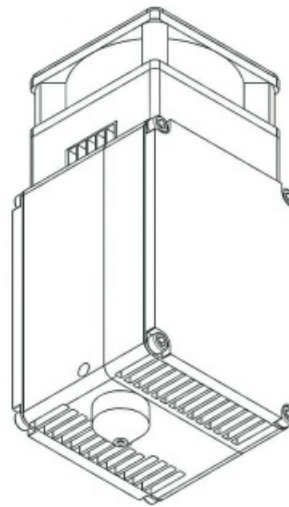
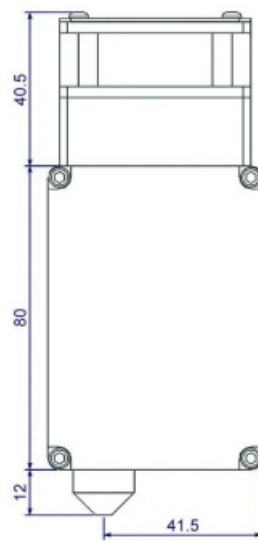
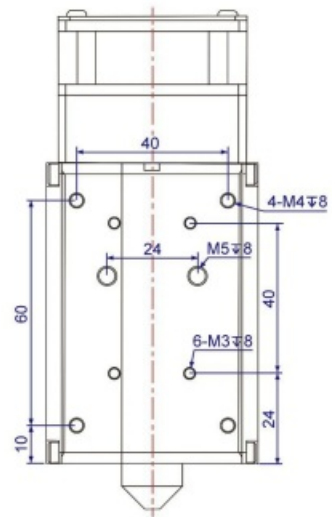
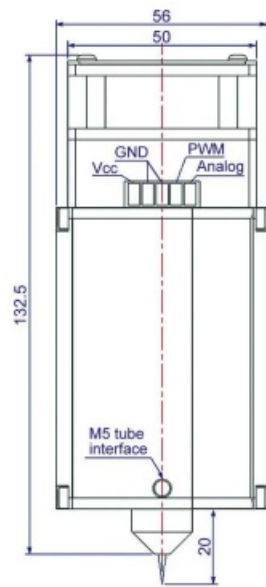


LASER MODULE INTRODUCTION

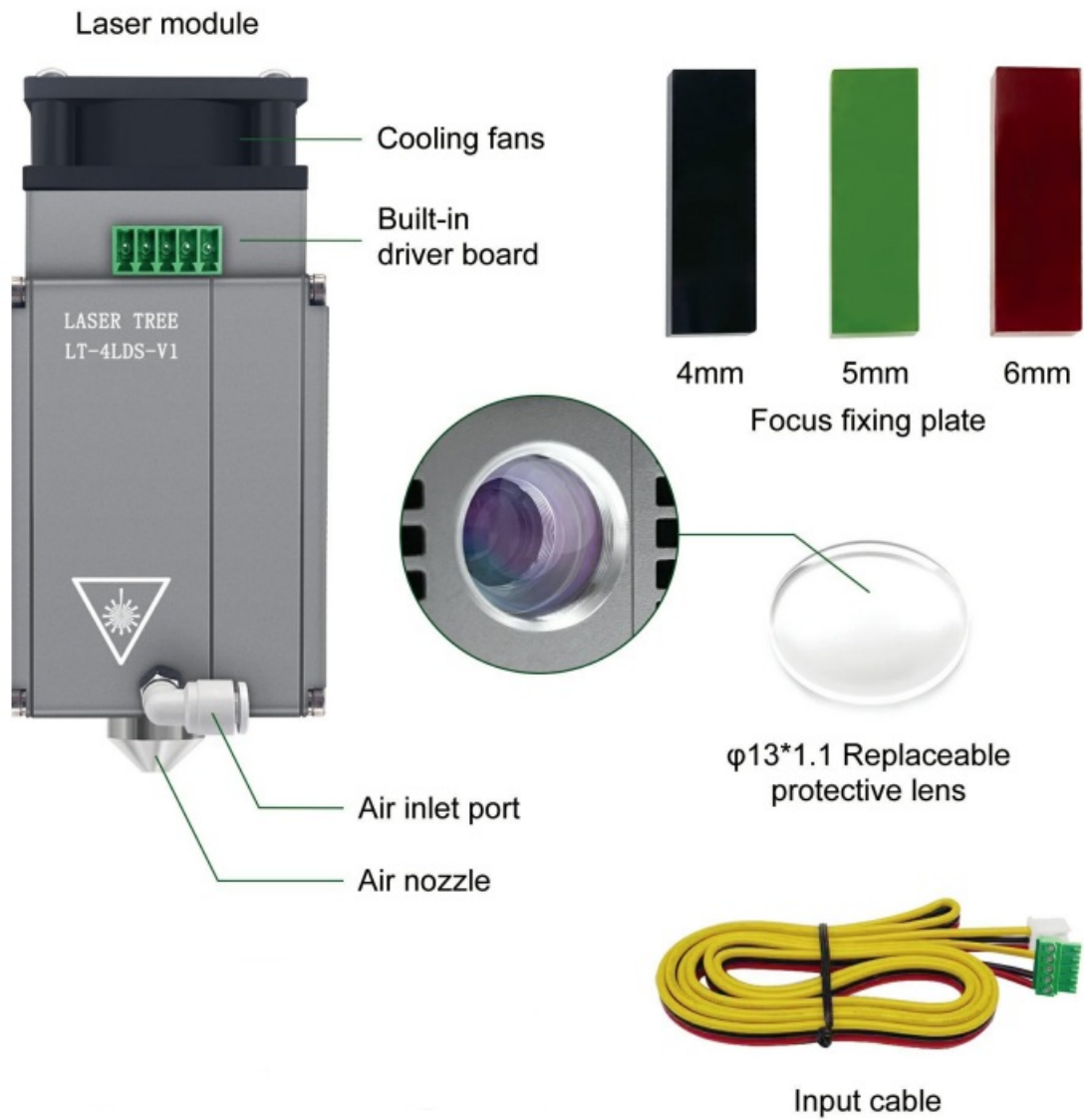
Parameters

- **Optical power:** 18W- 21W
- **Input:** 24V 2.3-3.2A
- **Wavelength:** 450nm (± 10 nm)
- **Focus length:** 20mm
- **Air assistance:** Built-in
- **Power adjustable:** TTL/PWM/Analog modulation
- **PWM modulation:** 0/5-12V, 0-5kHz
- **Fan speed:** 10000rpm
- **Operating temperature:** 0-60°C
- **Interface:** 2EDG-3.81
- **Cable:** 3PIN, 80cm
- **Material:** Aluminum alloy
- **Module weight:** 460g
- **Function:** Engraving or cutting

Outline dimension (Unit: mm)



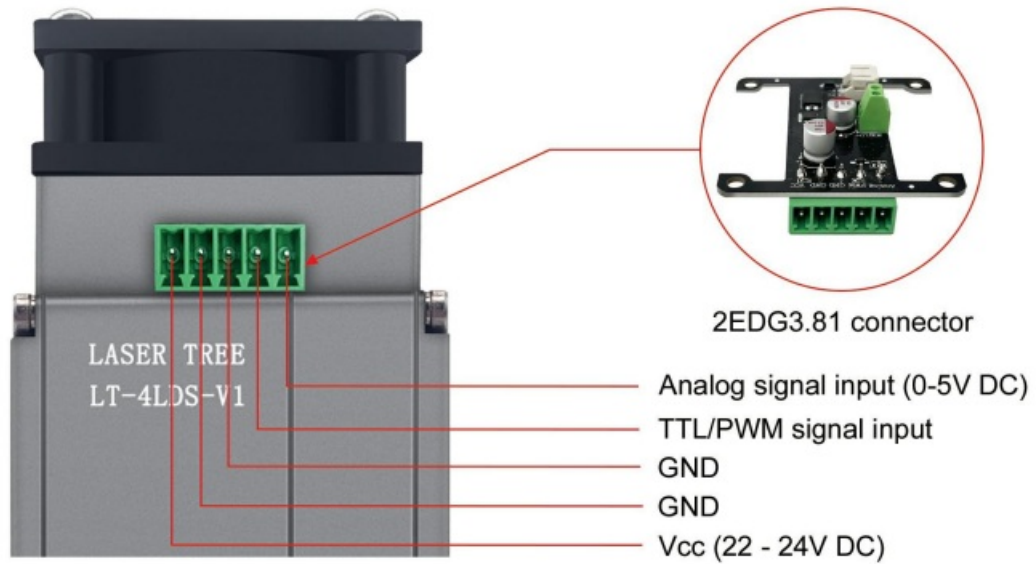
Standard configuration



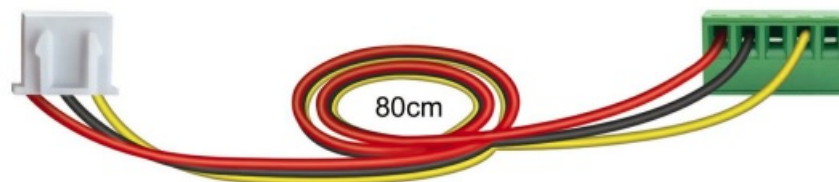
LASER MODULE CONNECTION DESCRIPTION

PIN Definition

I Built-in driver board



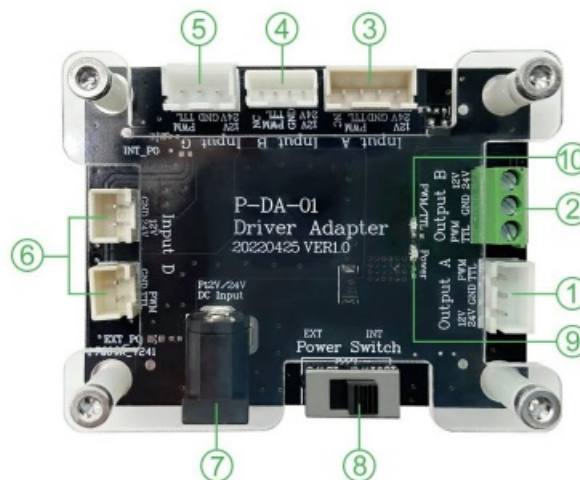
≡ Cable



Driver adapter

Note: This driver adapter DOES NOT come with the laser module. For more details, please refer to section 2.3 connection.

Model: P-DA-01



1. **Output A:** 3PIN connector
2. **Output B:** 3PIN connector
3. **Input A:** 4PIN connector
4. **Input B:** 4PIN connector

5. **Input C:** 3PIN connector
6. **Input D:** 2PIN connector
7. **DC Input:** 12V or 24V power adapter
8. **Power Switch:** EXT->External power supply INT->Internal power supply
9. **Power indicator:** It is red when the power cable is connected correctly.
10. **TTL/PWM indicator:** It is green when the TTL/PWM cable is connected correctly.

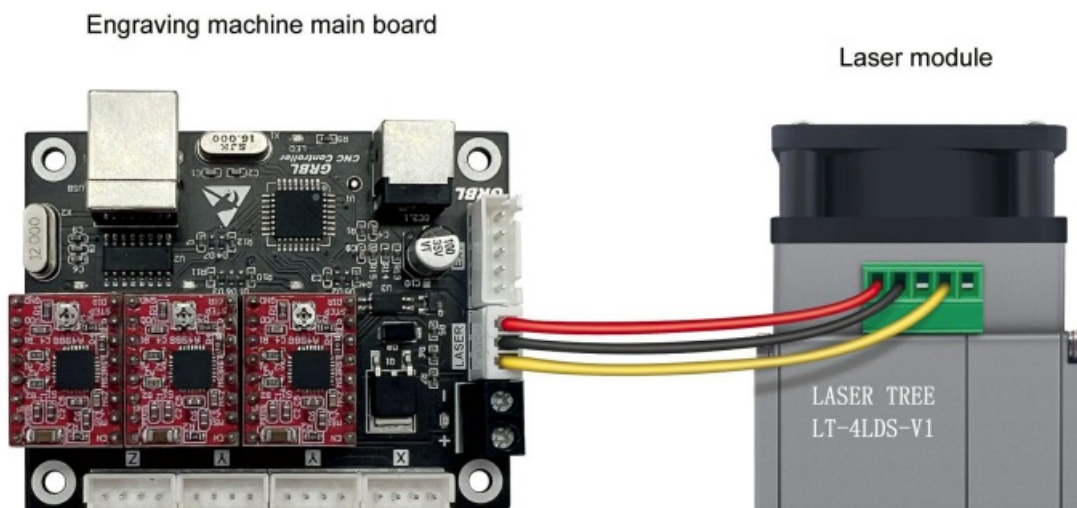
Connection

Please check whether the laser module is compatible with your engraving machine before connection.

- **A.** Check the voltage parameter of you engraving machine. Please ensure your engraving machine can provide at least 24V 4A power supply.
- **B.** Check the pin definition of the main board on your engraving machine. Please ensure your engraving machine main board has “PWM”, “GND” and “DC” ports.

1. “A”&”B”are both compatible.

Connect the laser module to the main board of your engraving machine directly.



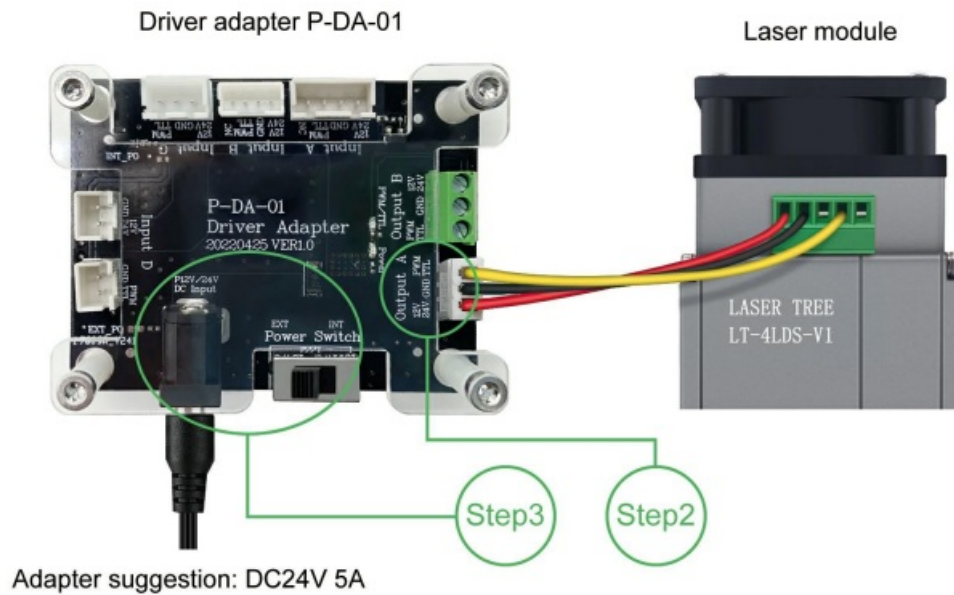
Reference picture

2. Only voltage is not matched.

The voltage parameter of your machine are not matched to the module.

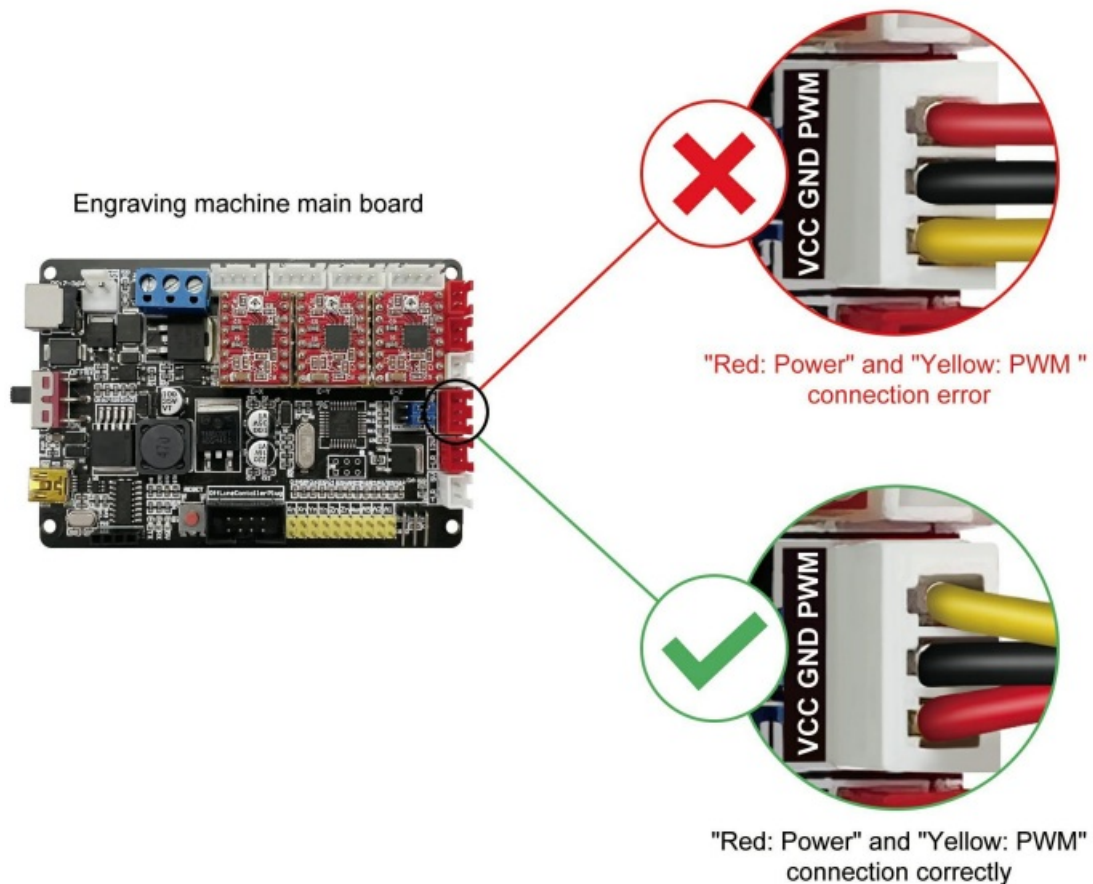
Machine	Laser Module	Solutions
12V	24V	Driver Adapter + 24V Power Supply
24V	24V	Plug and Play

1. Connect the cable of your engraving machine to the corresponding input connector on P-DA-01.
2. Connect the cable of the laser module to the Output A connector on P-DA-01. Connect the 24V power adapter to the DC Input connector on P-DA-01. Push the switch to EXT
3. position and the power is provided by external power adapter.



3. Only control board pin definition is not matched.

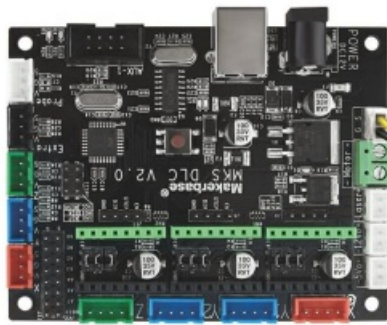
- Situation 1:** The definition of connector on the engraving machine main board is not pin-to-pin. Please rearrange the wire sequence of the cable to make each wire is well matched with the pin definition on the main board.



- Situation 2:** Please use P-DA-01 if the main board of your engraving machine is not 3pin, such as 2pin.

Laser Module	Machine	Solutions
3PIN	2PIN	Driver Adapter
	Other pins	Driver Adapter

Engraving machine main board



Driver adapter P-DA-01



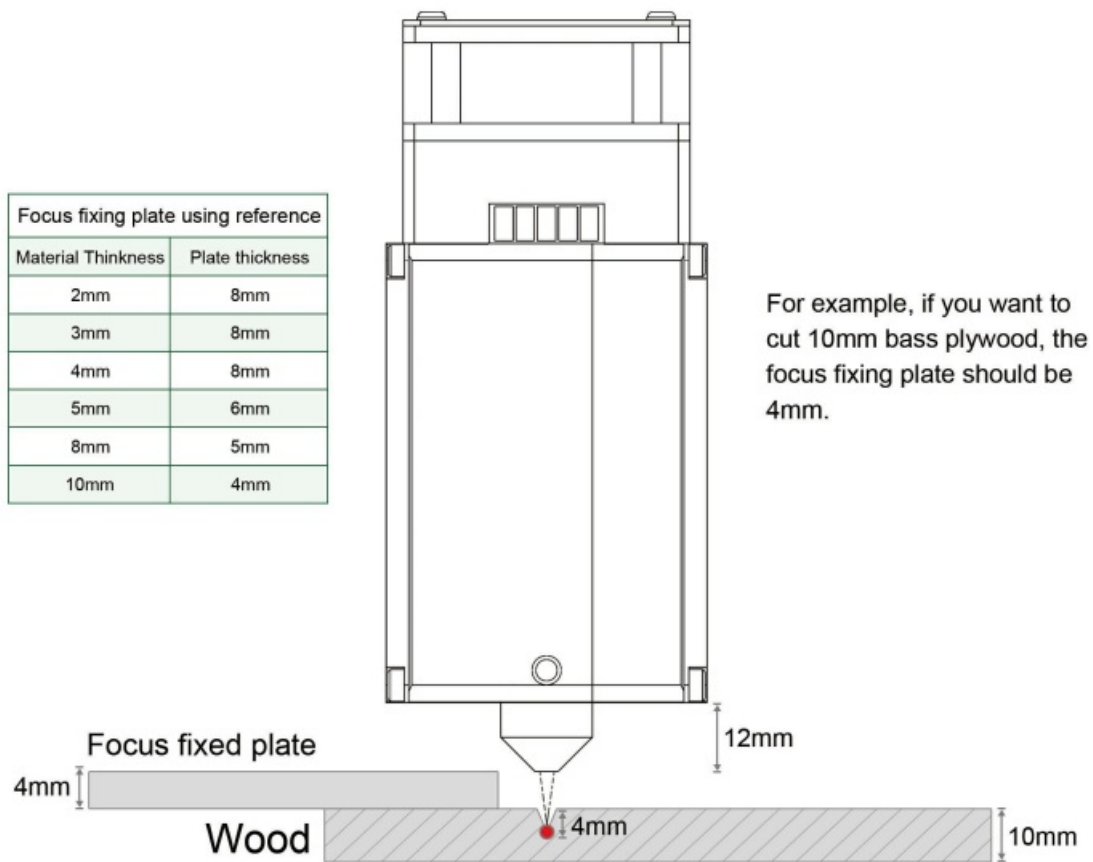
Laser module



LASER MODULE REFERENCE SETTINGS

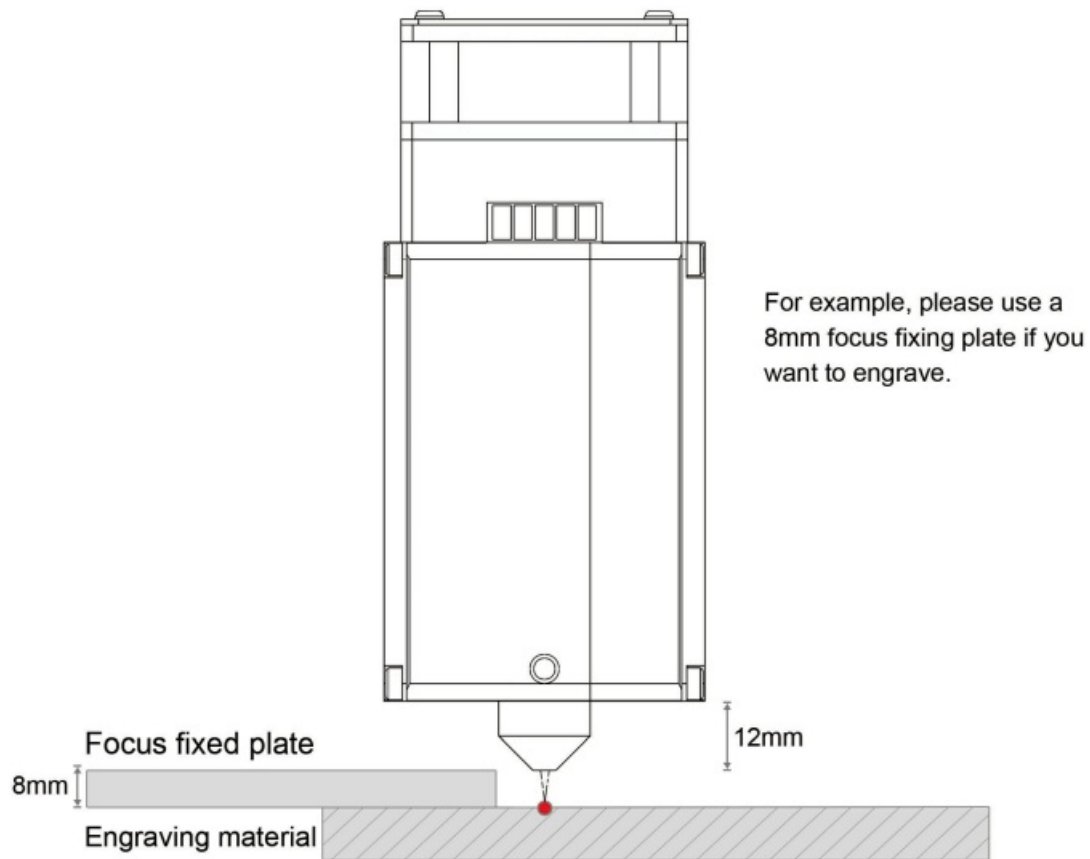
For cutting

The focal length of the L T-4LDS-V1 laser module is 20mm. When cutting, you only need to make the focus located a bit lower than the surface of materials.



For engraving

When engraving, please ensure that the focus is located on the engraving material surface.



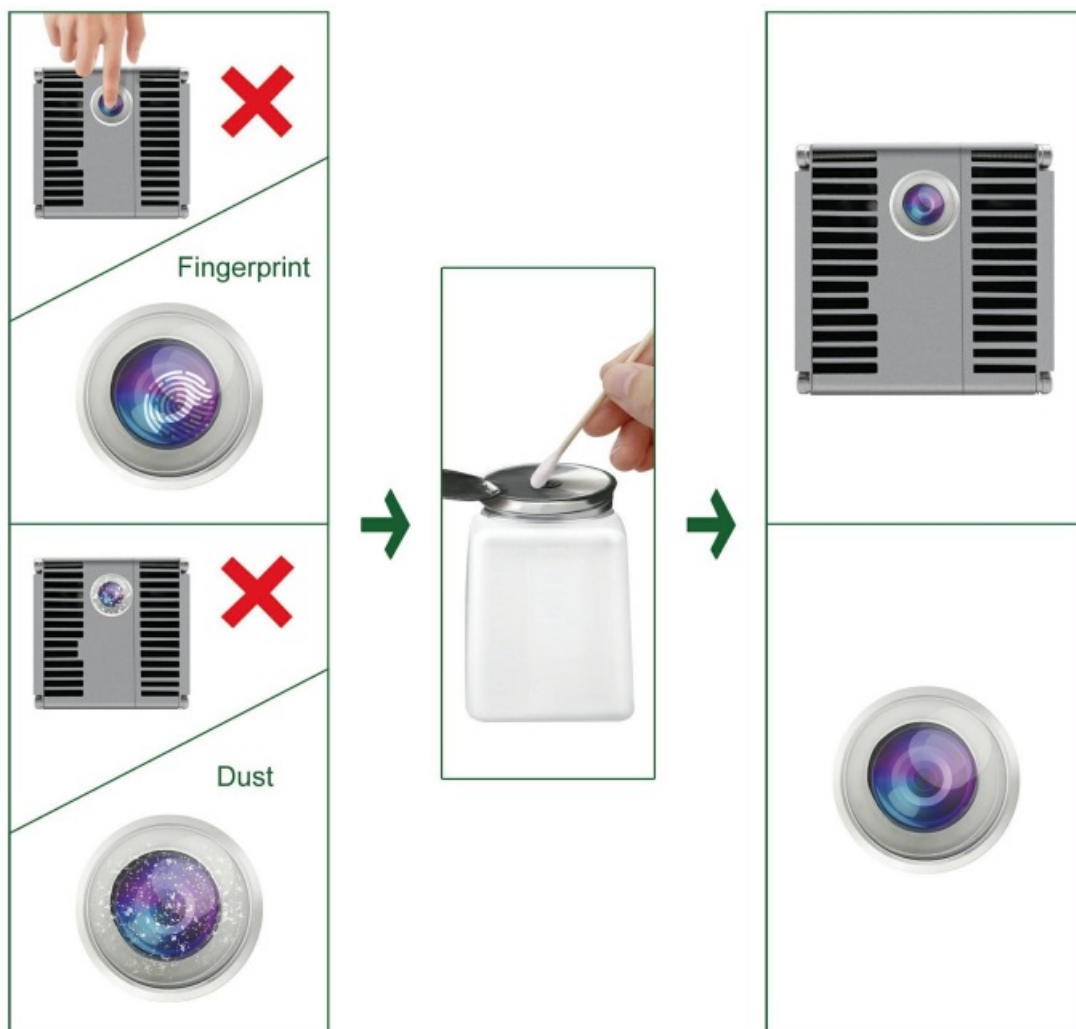
PRECAUTIONS AND MAINTENANCE

Precautions


- Please wear laser goggles to protect your eyes when you use this laser ~ module.
- Please ensure that the air pump is turned on before you start cutting. If not, the smoke will contaminate the lens.
- This laser module doesn't support hot plug, hot plug may cause damage to the laser module.

Maintenance

- When the laser module is not used for a long time, please ensure that the lens is not polluted by dust.
- When you replace the air nozzle, please ensure that your operation will not pollute the lens. Finger prints or dust on the lens will weaken the output power of the laser module, or even damage the lens.
- When you find the cutting ability decreases, the lens might be not clean. Please use a clean alcohol swab to clean it according to the following figure.



Documents / Resources

 LT-4LDS-V1 USER MANUAL	LASER TREE LT-4LDS-V1 20W Optical Power Laser Module [pdf] User Manual LT-4LDS-V1, 20W Optical Power Laser Module, LT-4LDS-V1 20W Optical Power Laser Module, Optical Power Laser Module, Power Laser Module, Laser Module, Module
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