Manuals+

☰

Contents [hide]

LASER TREE K20 Pro Optical Power Laser Module

USER MANUAL

- Laser may cause damage to your skin. Please do not expose your skin directly to the laser.
- 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.
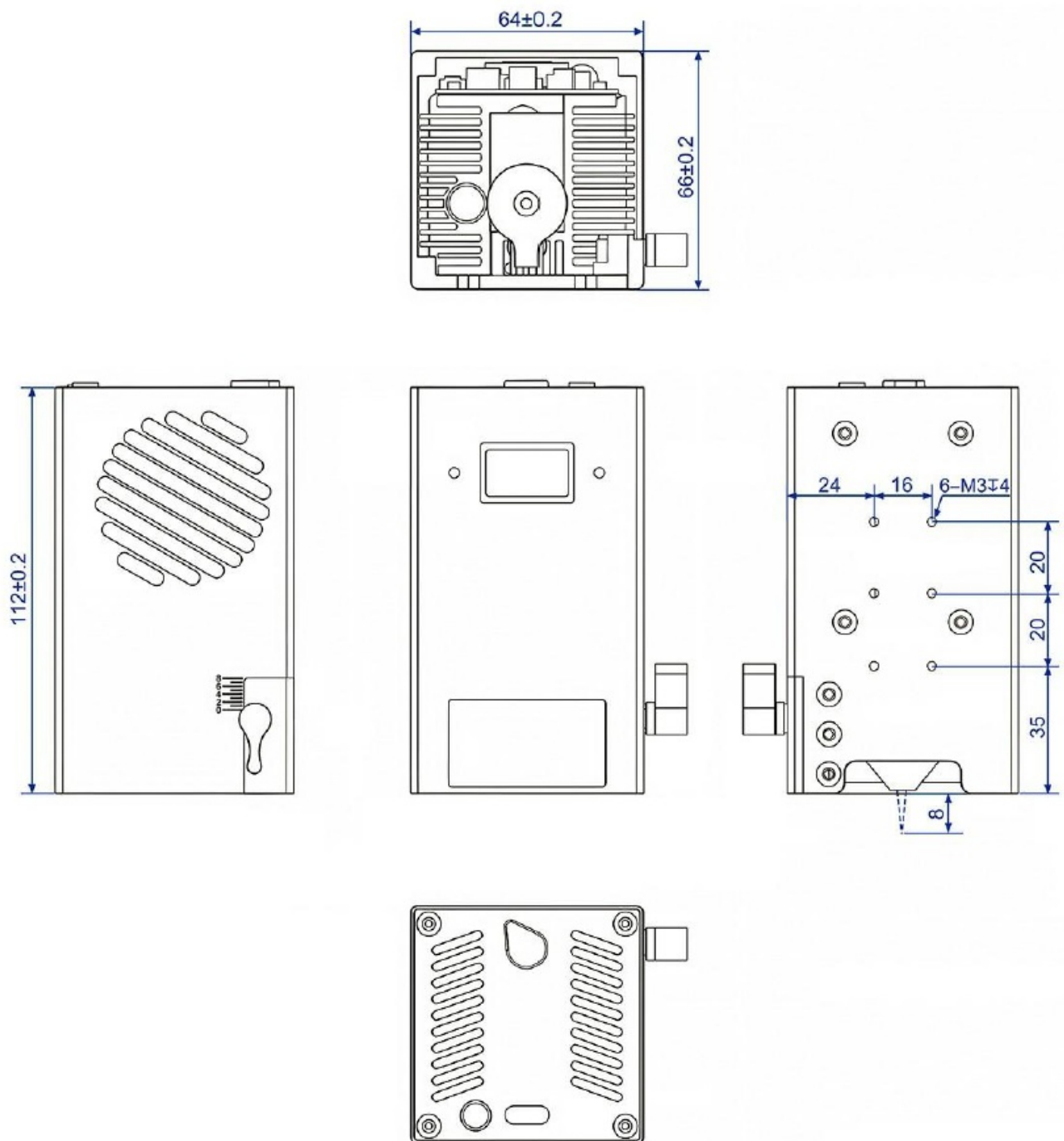- This laser module doesn't support hot plug. Hot plug may cause damage to the laser module.

PRODUCT INTRODUCTION

Parameters

Optical power:	18W-22W
Input:	DC24V 4A

Wavelength:	450nm (+10nm)
Focus length:	40mm
Air assistance:	Built-in airway
Power adjustable:	TTL/PWM
PWM modulation:	0/3-12V, 0-5kHz
Fan speed:	Dual fans, 6000RPM
Operating temperature:	0-60°C
Interface:	MR
Cable:	3PIN, 80cm
Material:	Aluminum & Copper
Module weight:	587g
Application:	Engraving & Cutting

Outline dimension (Unit: mm)

Packing list

Input cable *1

Driver adapter *1

Sliding plate *1

Power supply *1

1.5m Air tube *1
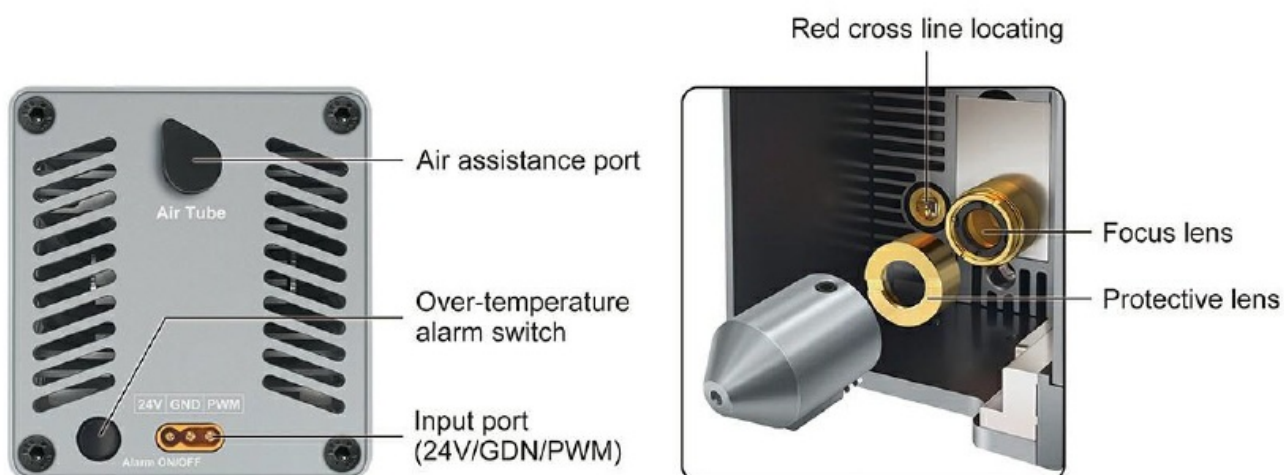Φ8-5mm

2mm L-wrench *1

Spare protective lens *1

LASERTREE
K20 Pro

Power   Signal

Laser module *1

PRODUCT DESCRIPTION

Overview

Power indicator

Working temperature display

Signal indicator

Dual-fan design

LASERTREE
K20 Pro

Fixed focus lever

You can easily adjust the fixed focus distance according to different engraving and cutting requirements.

Laser view window

Air assistance port

Air Tube

Over-temperature alarm switch

Input port
(24V/GDN/PWM)

24V GND PWM

Alarm ON/OFF

Red cross line locating

Focus lens

Protective lens

Input port

Use the MR30-M pluggable connector.

- VCC (DC24V)
- GND
- TTL/PWM in (0-5kHz)

24V GND PWM

Air assistance port

- Built-in air assist to get clean-cut edges and improve cutting performance.

Air pump suggestion

- Air pressure and capacity: ≥Q.027kPa, 27L/min
- Air tube: outer diameter 8mm and inner diameter≥5mm

Working temperature display

- The output power stability and lifetime of the laser module has a strong relationship with the working temperature of the laser diode. L T-K20 built-in a thermistor at the highest temperature point near the laser diode, the operating temperature of the diode can be displayed on the digital tube in real-time.
- We suggest the working temperature of the laser module is controlled below 55° C and the working environmental temperature below 35° C to get good power stability and durability.

Over-temperature alarm switch

- When the working temperature of the laser module is higher than 55° C, the buzzer will sound an alarm.
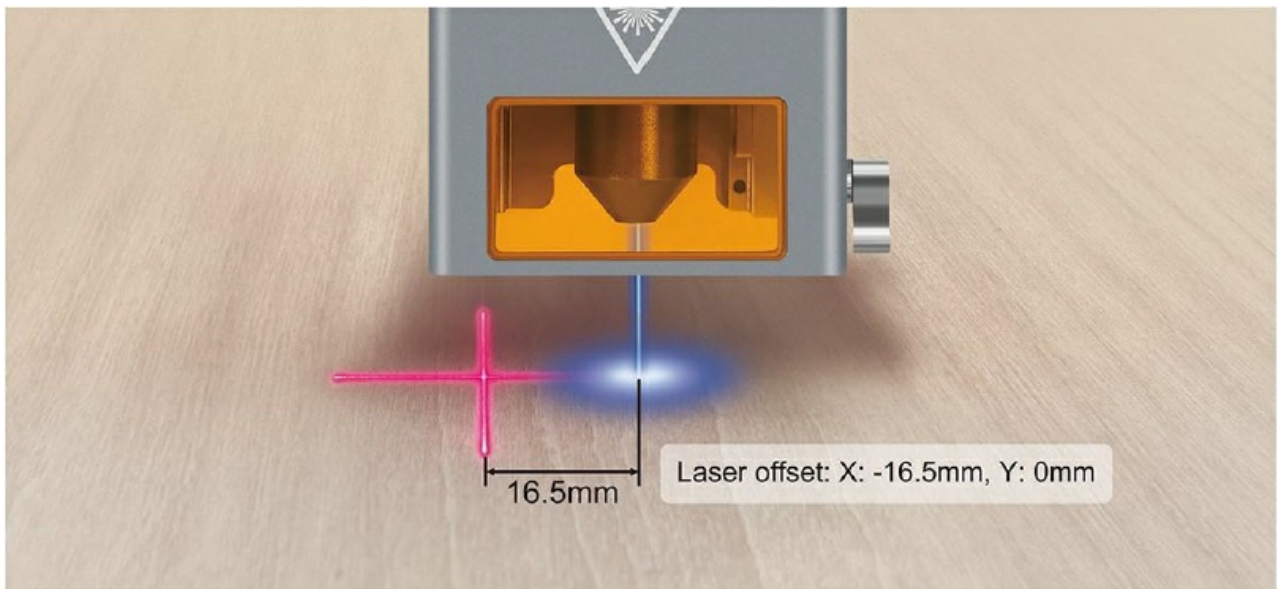
Working status indicator

- Power indicator: it is red when the power supply is connected.
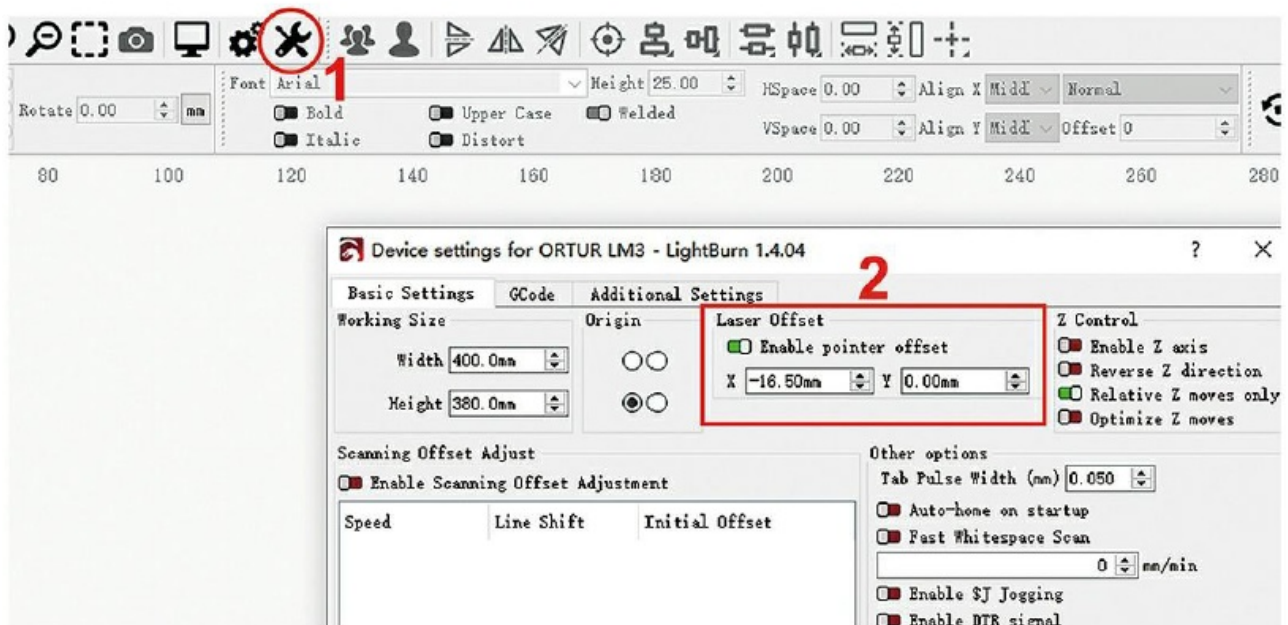- Signal indicator: it is green when a signal is received.

Red cross line locating
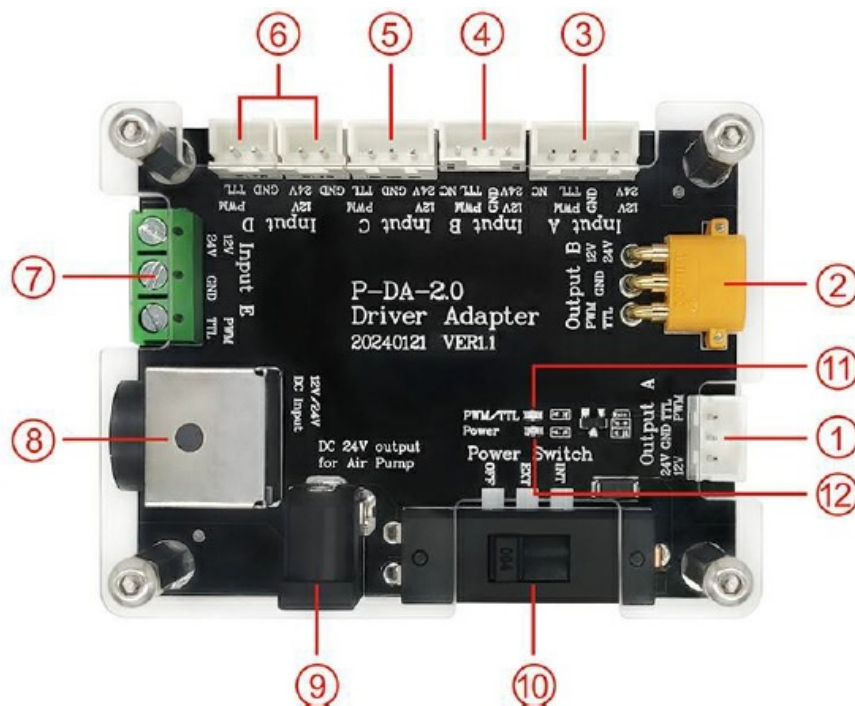
- Help you to place the material in the position.

16.5mm

Laser offset: X: -16.5mm, Y: 0mm

LightBurn Software settings

→ Device setting → Laser offset → X axis: -16.5mm

Driver adapter (Model: P-DA-02)

(1) Output A: XH2.54-3Pin	(2) Output B: MR30-M
(3) Input A: XH2.54-4Pin	(4) Input B: PH2.0-4Pin
(5) Input C: XH2.54-3Pin	(6) Input D: XH2.54-2Pin
(7) Input E: KF350-3Pin	(8) 12V/24V DC Input: 4Pin

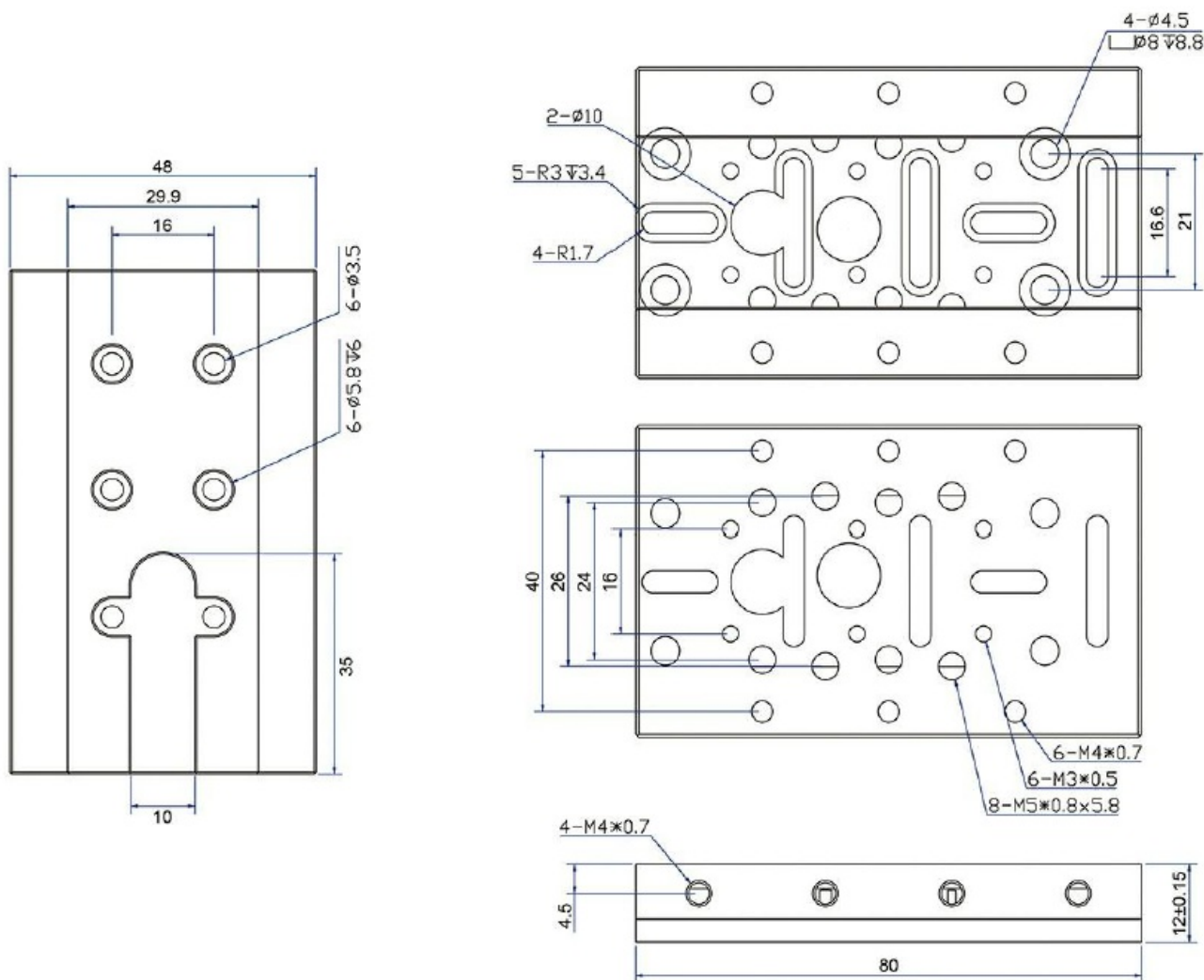| (9) 24V output for air pump: DC5.5*2.1mm |
|---|
| (10) Power Switch: • OFF-Power off   • EXT-External power supply
                • INT-Internal power supply |
| (11) TTL/PWM indicator: It is green when the TTL/PWM signal is received. |
| (12) Power indicator: It is red when the power cable is connected correctly. |

Sliding plate

• Multiple holes bring you widespread installation compatibility.

Outline dimension (Unit: mm)

Accessories for the sliding plate

M3x6 Fasten screw*4   M4x20 Fasten screw*2   2.5mm L-wrench

CONNECTION DESCRIPTION

- Please check whether there is a PWM/TTL and GND output port on the engraver's main board before connection.

STEP 1

- Connect one end of the input cable to the laser module and the other end to the corresponding output B port on the driver adapter.
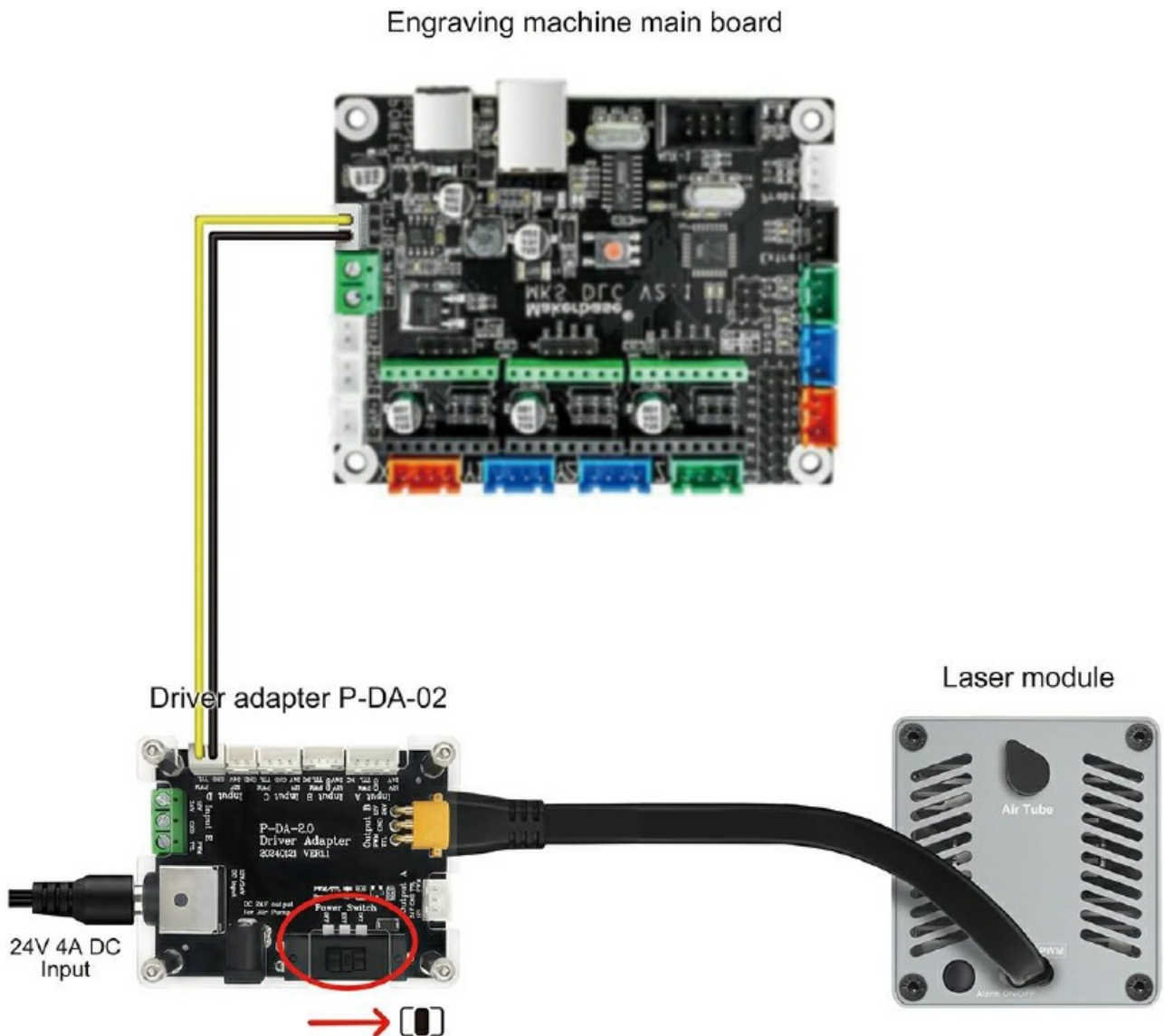

STEP 2

- Connect the 24V power adapter to the DC input connector on the driver adapter.
- Push the switch to the "EXT" position, and the power is provided by an external power adapter.

STEP 3

- Connect the engraving machine's main board cable to the corresponding input port on the drive adapter.
- (The picture below is a connection example. For more Input ports, please refer to the driver adapter description)

Engraving machine main board
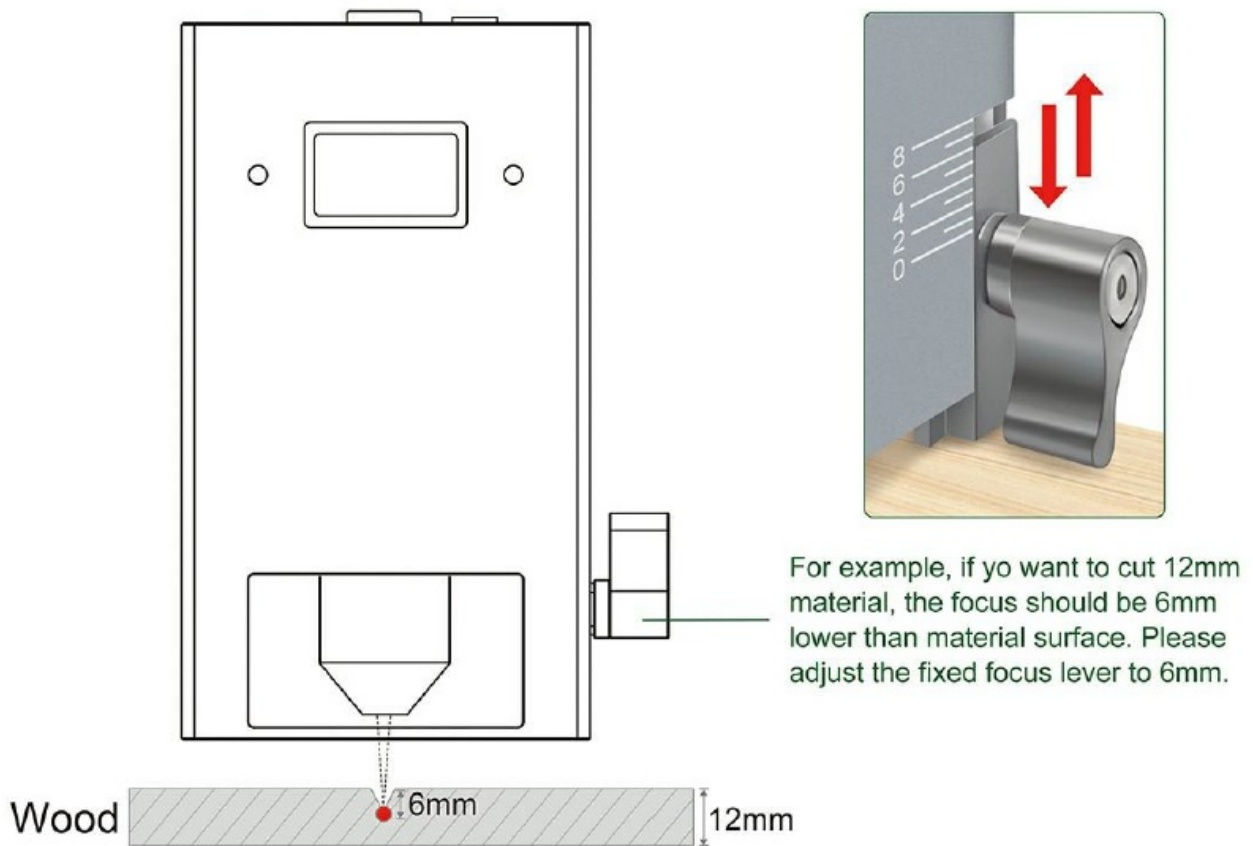
Driver adapter P-DA-02

Laser module

24V 4A DC Input

FOCUS REFERENCE SETTINGS

- The focal length of the K20 Pro laser module is 40mm.

For cutting

- Please make the focus location lower than the cutting material surface according to the following.
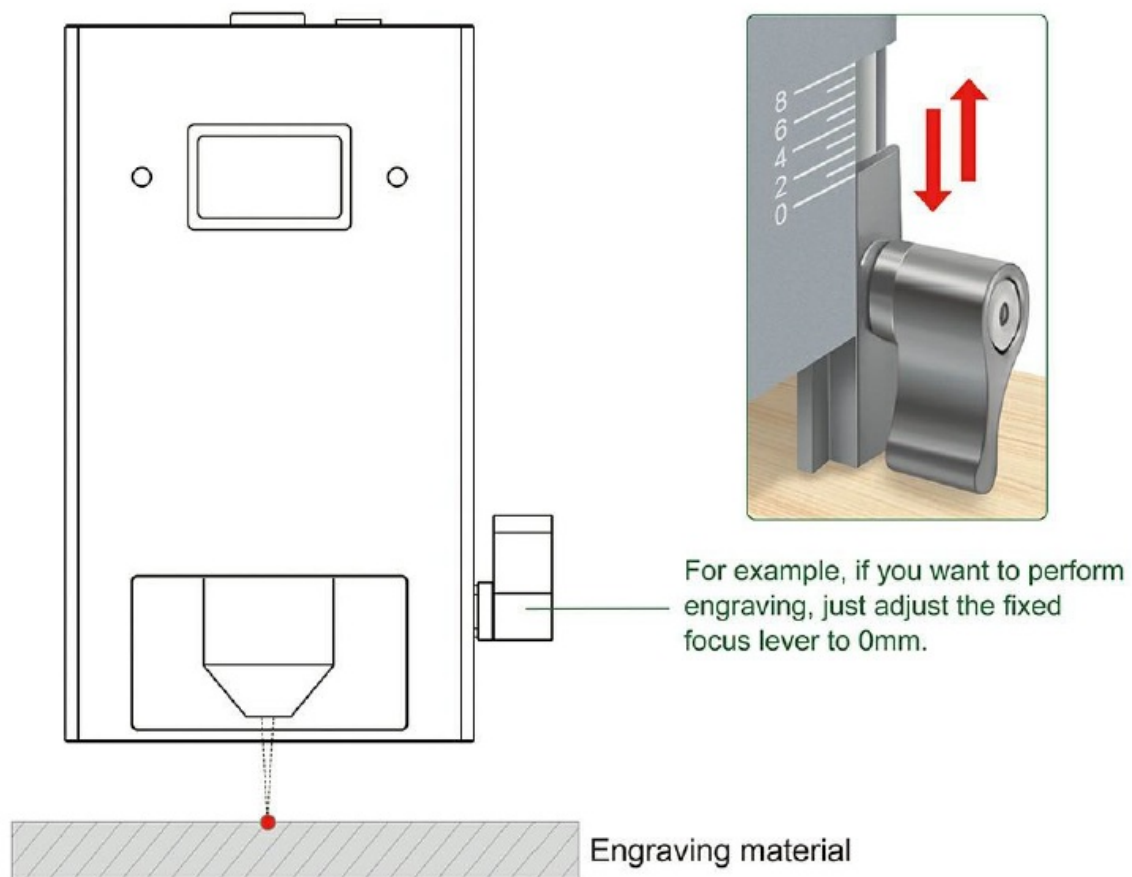
Reference settings for cutting

For example, if yo want to cut 12mm material, the focus should be 6mm lower than material surface. Please adjust the fixed focus lever to 6mm.

Wood 6mm 12mm

Fixed focus lever usage reference						
Material thickness	< 5mm	5mm	8mm	10mm	12mm	≥ 15mm
Fixed focus lever	0mm	2mm	4mm	5mm	6mm	7mm

For engraving

- Please focus on the engraving material surface.

Reference settings for engraving

For example, if you want to perform engraving, just adjust the fixed focus lever to 0mm.
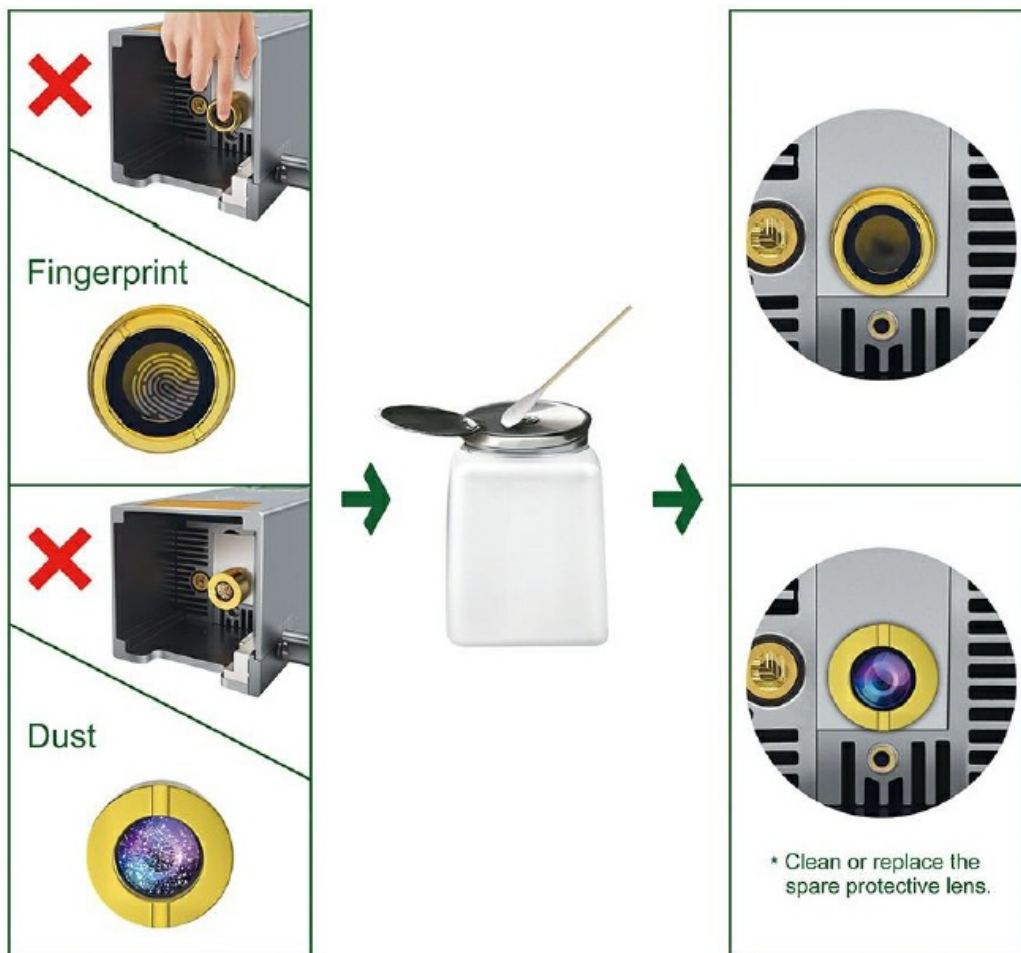
Engraving material

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. Fingerprints or dust on the lens will weaken the output power of the laser module, or even damage the lens.
- When you find that the cutting ability of the laser module decreases, the lens might not be clean. Please use a clean alcohol swab to clean it according to the following figure.

Caution for lens cleaning

- Make sure the engraving module is disconnected from the power supply before wiping the lens.
- After wiping, allow the lenses to dry naturally for 3 to 5 minutes before use.

For more information about maintenance, please contact us at lasertree@micost-optotech.com.

Documents / Resources

	LASER TREE K20 Pro Optical Power Laser Module [pdf] User Manual K20 Pro Optical Power Laser Module, K20 Pro, Optical Power Laser Module, Power Laser Module, Laser Module, Module

References

- User Manual

📁 LASER TREE

🏷 K20 Pro, K20 Pro Optical Power Laser Module, Laser Module, LASER TREE, Module, Optical Power Laser Module, Power Laser Module

Leave a comment

Comment *

Name

Email

Website

☐ Save my name, email, and website in this browser for the next time I comment.

Post Comment

Search:

e.g. whirlpool wrf535swhz

Search

Manuals+ | Upload | Deep Search | Privacy Policy | @manuals.plus | YouTube