XTOOL | X1

20W Diode Galvo Module



User Manual

Statement – – – – – – – – – – – – – – – – – – – 01

List of items – – – – – – – – – – – – – – – – – – – 01

Meet the 20W diode galvo module – – – – – – – 02

Install the 20W diode galvo module – – – – – – – 03

Use the 20W diode galvo module – – – – – – – – 09

Maintenance – – – – – – – – – – – – – – – – – – 11

Compliance statements – – – – – – – – – – – – 13

After-sales services – – – – – – – – – – – – – – 13

Statement

Thank you for choosing xTool products!

If you use the product for the first time, read carefully all the accompanying materials of the product to improve your experience with it. To the extent permitted by applicable law, the Company shall not be liable for any loss or damage resulting from your failure to use the product in accordance with the instructions and requirements set forth in the Manual, or from your misuse or improper operation of the product.

The Company has collated the content of the Manual rigorously and carefully, but errors or omissions may remain.

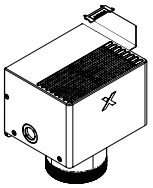
The Company is committed to continuously improving product functions and service quality, and therefore reserves the right to change any product or software described in the Manual and the content of the Manual at any time.

The Manual is intended to help you use the product properly and does not include any description of hardware and software configuration. For product configuration, refer to the related contract (if any) and packing list, or consult your distributor. Images in the Manual are for reference only and the actual product may vary.

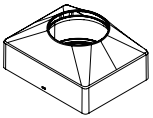
Protected by copyright laws and regulations, the Manual shall not be reproduced or transcribed in any way, or be transmitted on any wired or wireless network in any manner, or be translated into any language, or be modified in any way, such as content, image, or layout modification, without the prior written authorization of the Company.

The Company is committed to continuously improving the product and related materials. The product and the Manual are subject to change, and updates can be found at **xtool.com**.

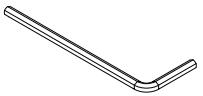
List of items



20W diode galvo module



Wide-aperture lens guard



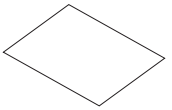
Hex key



Screw



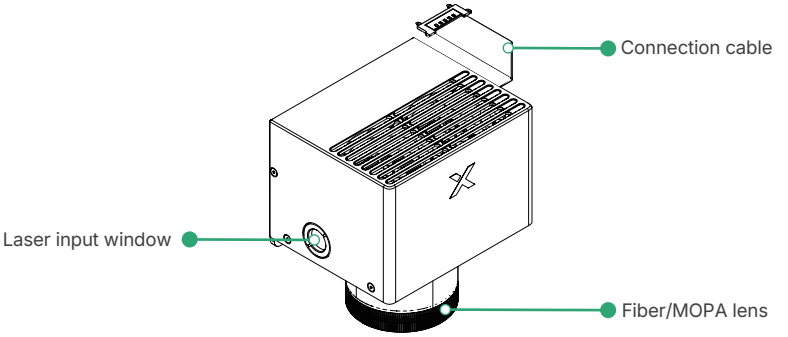
Calibration card



User Manual

Meet the 20W diode galvo module

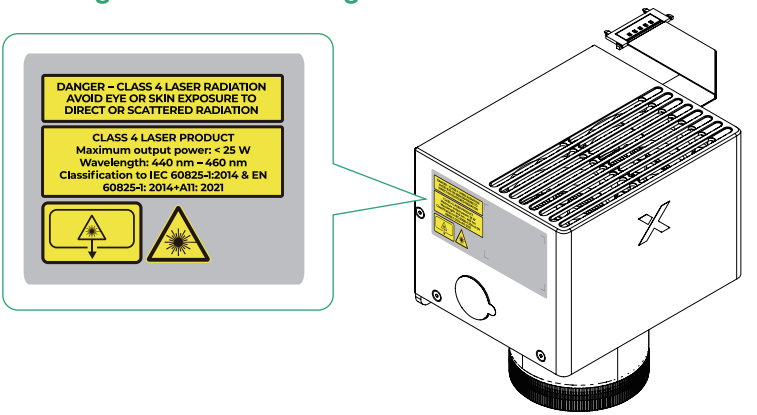
Product structure



■ The laser input window has a dustproof sticker. If a galvo source is not used, keep the sticker to avoid contaminating the optical window.

■ After removing the dustproof sticker, you can use the masking tape provided with xTool X1 to prevent dust.

Warning and instruction signs



Laser specifications

Laser type	Wavelength	Beam divergence	Average output power
Blue light	440 nm to 460 nm	–2 mrad to 2 mrad	< 25 W

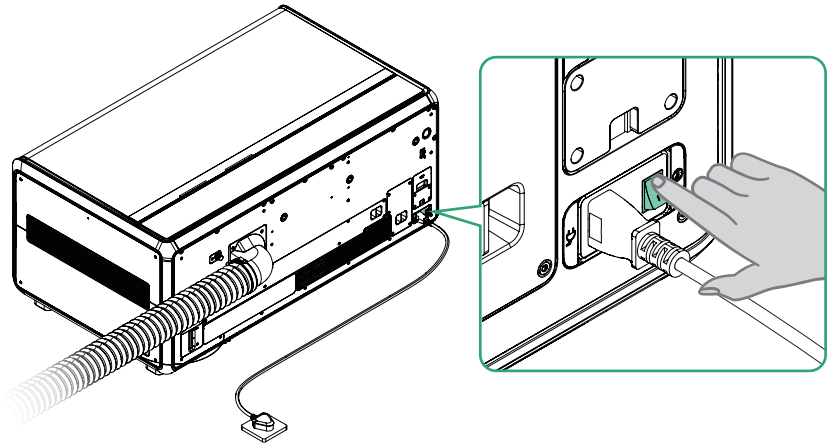
Working temperature

The 20W diode galvo module works properly at the temperature of 0°C to 35°C.

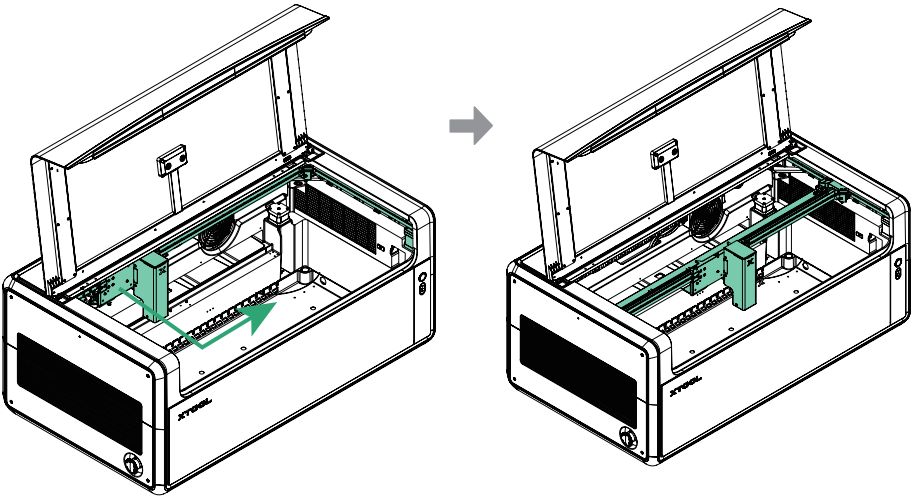
Install the 20W diode galvo module

Use the 20W diode galvo module only with xTool X1. Before use, read and follow Safety Instructions and Quick Start Guide of xTool X1.

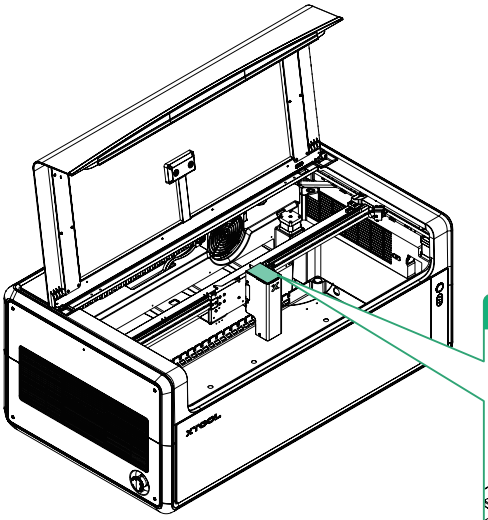
1 Turn off xTool X1.

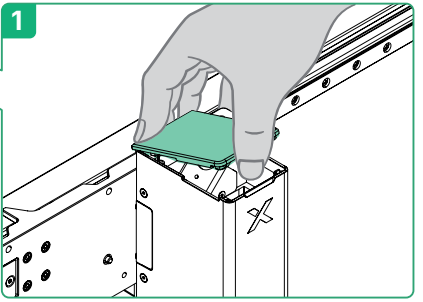


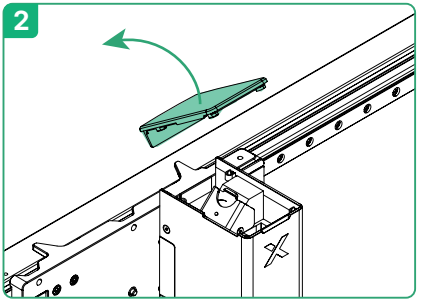
2 Open the lid. Adjust the x-axis guide rail and carriage position as indicated to facilitate the installation of the galvo module.



3 Remove the top cover of the CO_2 module.



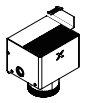




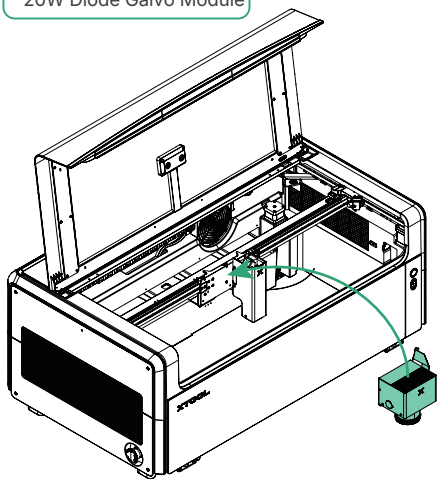
4 Install the galvo module onto the x-axis guide rail.

Please install the galvo module first as instructed, and connect the cable later.

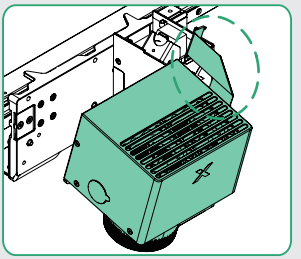
(1) Ensure that the connection cable of the galvo module faces upward. Align the positioning holes on the back of the module with the locating pins, and then push the module into place.

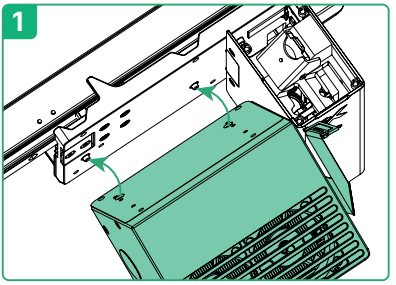


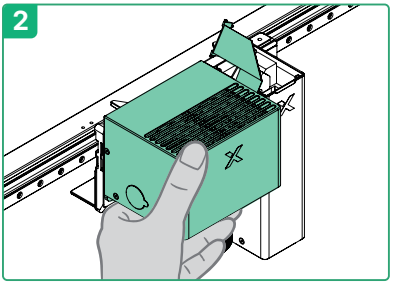
20W Diode Galvo Module



Ensure that the cable faces upward.

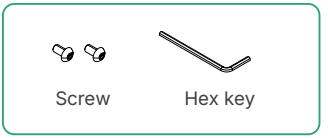


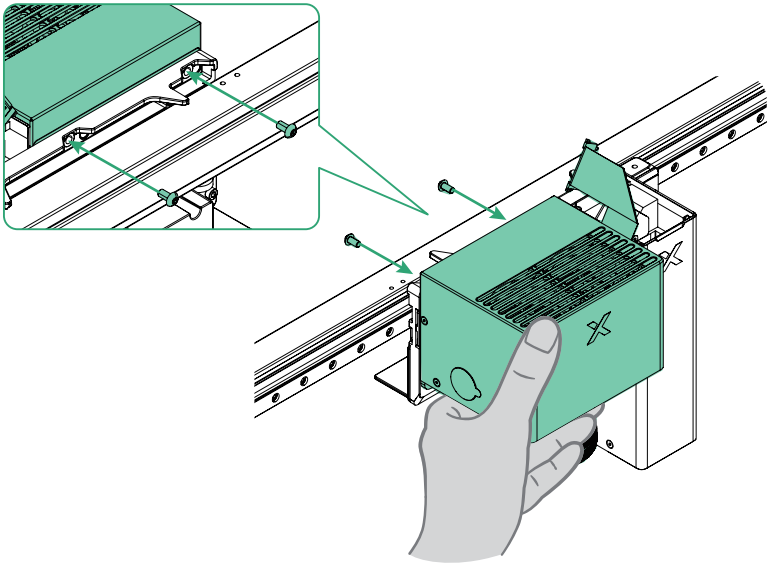




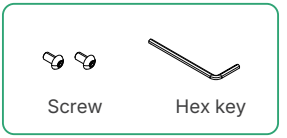
After installing the galvo module, hold it by hand to prevent it from falling.

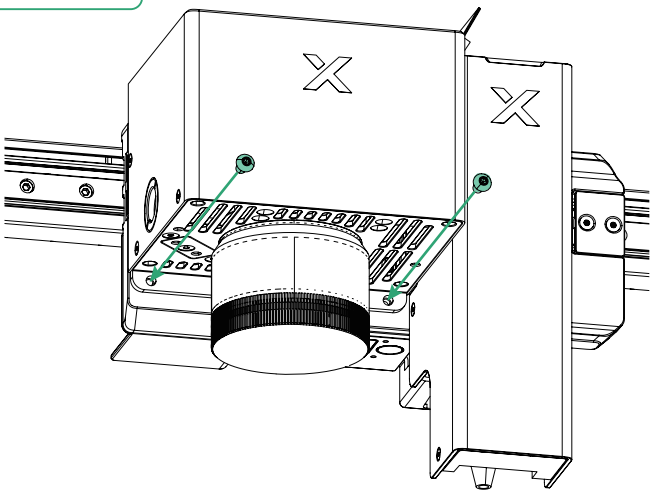
(2) Hold the galvo module in place and tighten the two upper screws.





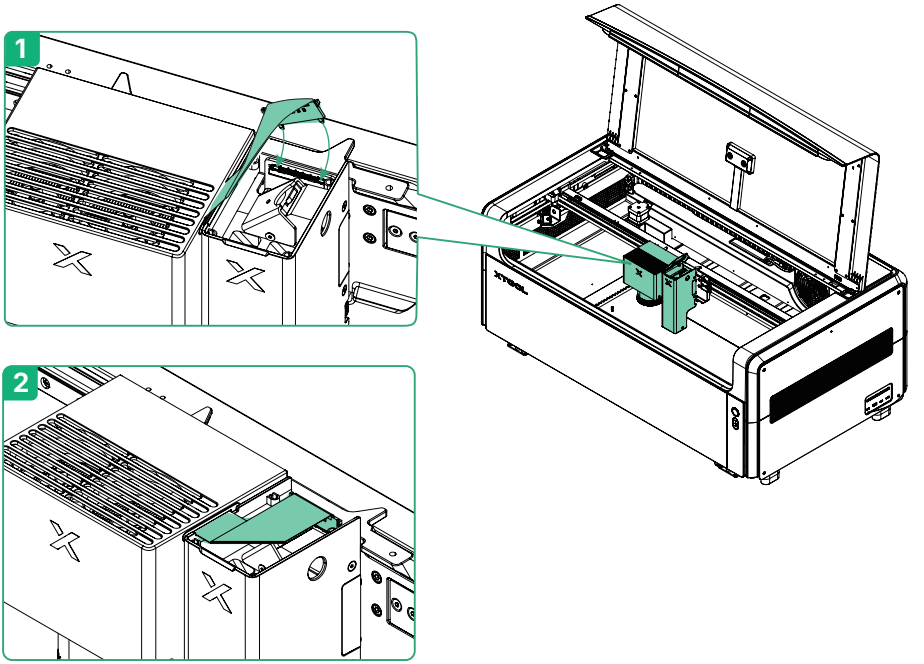
(3) Tighten the two lower screws.



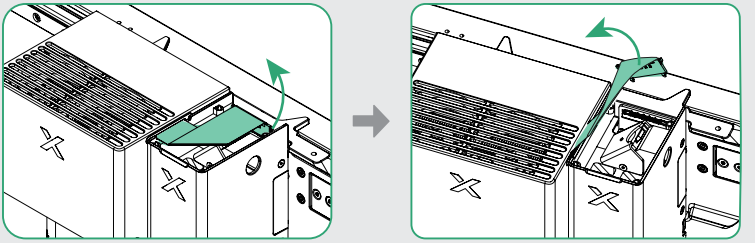


5 Connect the galvo module to the main unit.

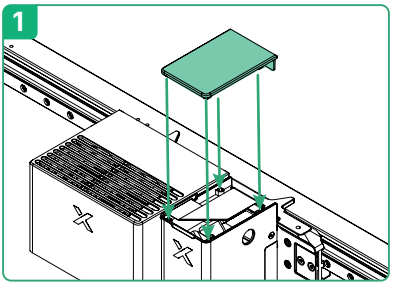
(1) Plug the connection cable of the galvo module into the port on the CO_2 module.

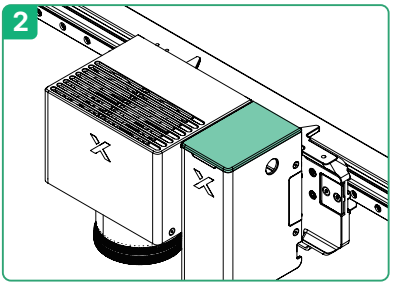


If you need to remove the galvo module later, press and hold the buttons on both sides of the connector while pulling out the cable.

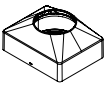


(2) Align to the magnetic posts, and reinstall the cover.

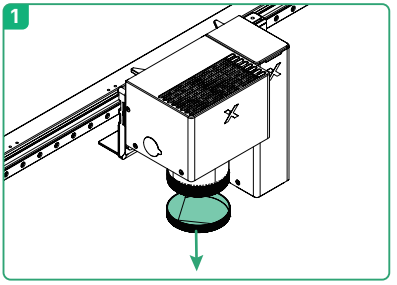


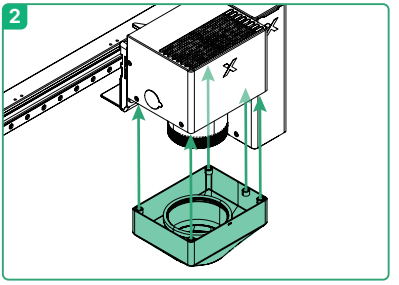


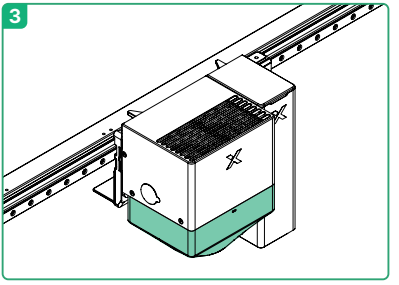
6 Remove the field lens cover, and install the wide-aperture lens guard.



Wide-aperture lens guard







The 20W diode galvo module has now been fully installed. If the kit also includes a galvo source, refer to its User Manual to install it first. Ensure that the main unit and all accessories are fully installed before proceeding to initial calibration and processing operations in xTool software.



User Manual of Galvo Source

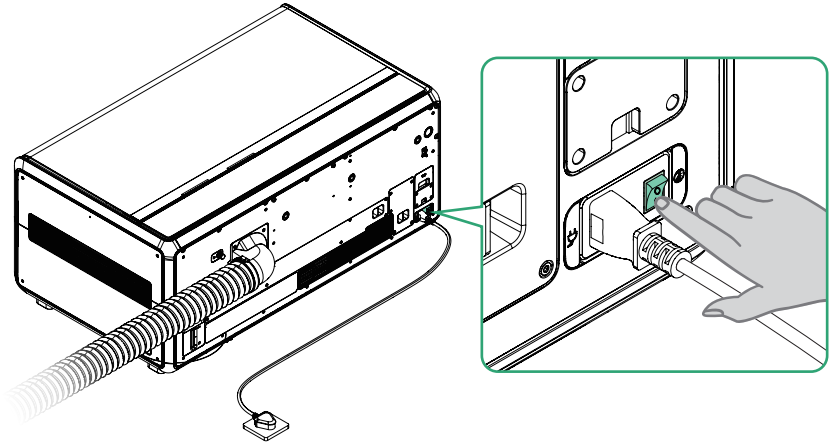
Use the 20W diode galvo module

1 Get the xTool software.

Go to **s.xtool.com/software** to download and install xTool software.

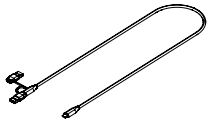


2 Turn on xTool X1.



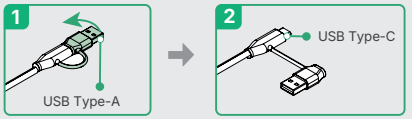
3 Connect xTool X1 with the software.

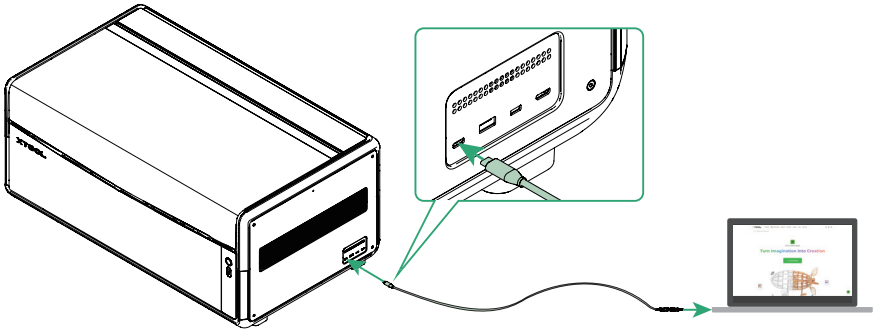
Use the USB cable to connect xTool X1 to your computer. Then, open xTool software and connect xTool X1 in the software.



USB cable
(included in the package of xTool X1)

The other end of the USB cable can be connected to a USB Type-A or Type-C port. Choose between the connectors based on your needs.





To view connection instructions, scan the QR code or visit the link.

support.xtool.com/article/3123

4 Calibrate the optical path.

Upon first use of the galvo module, xTool software will prompt you to calibrate the optical path. Follow the on-screen instructions to complete the calibration.

5 Use the galvo module.

Scan the QR code or visit the link to view detailed instructions on how to use the 20W diode galvo module.

support.xtool.com/article/3147

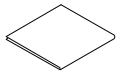
Maintenance

Disconnect power before maintaining the product.

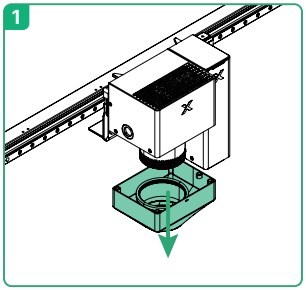
Clean or replace the field lens protector

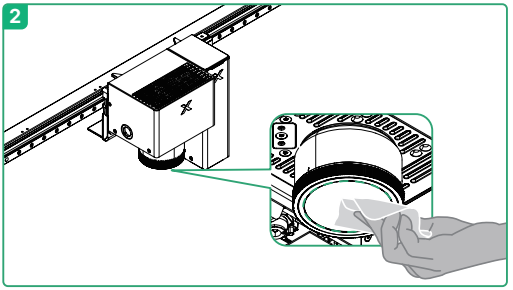
If the laser power decreases, for example, engraved patterns are shallow or materials cannot be cut through, the field lens protector may be dirty or damaged. First, try cleaning the lens protector. If the problem persists after cleaning, remove the lens protector for inspection and determine whether it needs to be replaced.

(1) Remove the lens guard, then use lens wipes or a lint-free cloth (xTool Lens Wipes recommended) moistened with alcohol to clean the lens protector.



Cleaning tools (not included)

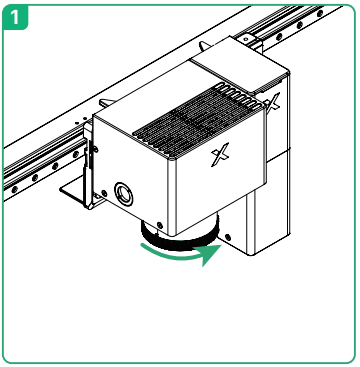


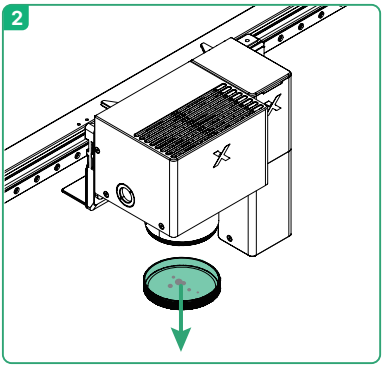


If the laser power remains weak after cleaning the lens protector, continue with the following steps to check and replace the lens protector.

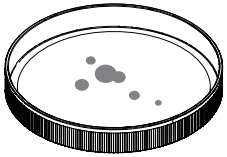
- Please replace the lens protector in a dust-free or relatively clean environment.
- Before operations, wash your hands or wear lint-free gloves (not included).

(2) Unscrew the cover in the direction indicated by the arrow, then remove the cover with the lens protector.





(3) Check the lens protector. If the glass is burned or heavily dirty and cannot be cleaned, replace the lens protector according to step (4).

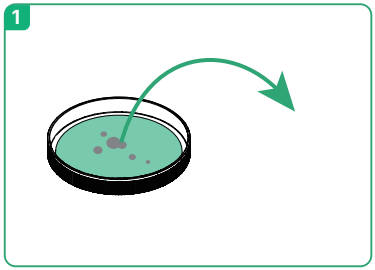


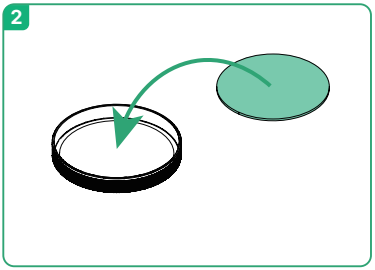
(4) Replace the lens protector, then install the cover and lens protector back to the device.

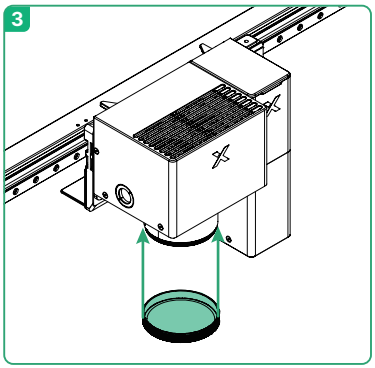


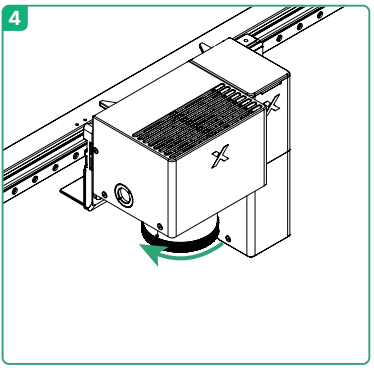
New lens protector (sold separately)

Do not touch the glass with your fingers or other tools during replacement as the glass may get dirty. If the glass gets dirty or dusty, use a cotton swab to clean it.









Compliance statements

EU declaration of conformity

Hereby, Makeblock Co., Ltd., declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/30/EU and the RoHS Directive 2011/65/EU & (EU) 2015/863. The full text of the EU declaration of conformity is available at the following internet address: **support.xtool.com/article/2084**

EU responsible person

EU responsible person: Makeblock Europe B.V.

Address: Westplein 12, 3016 BM, Rotterdam, the Netherlands

E-mail address: **support@info.xtool.com**

FCC statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Responsibility party: XTL US INC.

Responsibility party address: 2019 LEGHORN STREET, MOUNTAIN VIEW, CA 94043

Website: **support.xtool.com**

After-sales services

For technical support, contact us at **support@info.xtool.com**.
For more information about after-sales services, visit **support.xtool.com**.

XTOOL