CREALITY

CR-Laser Falcon User Manual

CR-Laser Falcon 快速使用指南

V1.0



深圳市创想三维科技股份有限公司
SHENZHEN CREALITY 3D TECHNOLOGY CO., LTD.

3D打印产业布道者

3D Printing Evangelists

渲染图 Rendering picture



尊敬的用户：

感谢您选择创想三维的产品。为了您使用方便，请您在使用之前仔细阅读本快速使用指南，并严格按照快速使用指南的指示进行操作。

创想三维团队时刻准备为您提供优质的服务。在使用过程中无论遇到什么问题，请按照快速使用指南结尾所提供的电话、邮箱与我们进行联系。为了您能够更好地体验我们的产品，您还可以从以下方式获取设备操作知识：

随机使用说明：您可以在 TF 卡内找到相关使用说明及视频。

您还可以登陆创想三维官网 (www.cxsw3d.com) 寻找相关软硬件、联系方式、设备操作、设备保养等信息。

Dear Consumers:

Thank you for choosing our products.For the best experience,please read the instructions before operating the machine. Our teams always be ready to render you the best services. Please contact us via the phone number or e-mail address provided at the end when you encounter any problem .

For a better experience in using our product, you can also learn how to use the engraving machine in the

following ways:

View the accompanied instructions and videos in the TF card.

Visit our official website www.creality.com to find relevant software/hardware information,contact details,operation and maintenance instructions.

固件升级

登录官网 https://www.cxsw3d.com, 点击首页“服务支持 – 资料下载”下载最新固件, 保存至 TF 卡并插入机器, 上电可自动更新。

Firmware Upgrade

Please login the official website https://www.creality.com/download, select the relevant engraving machine and model and download the latest firmware.Save it to TF card and it can be automatically updated when powered on.

使用须知

激光雕刻机在雕刻或切割材料时使用高密度激光束照射材料, 使材料表面产生高温, 目的是在不燃烧的情况下使材料气化。但大多数材料本质上是易燃的, 可能被点燃并形成明火, 明火可能烧毁机器及其周围环境。

请遵循以下操作原则：

1. 请勿将本产品放置在易燃易爆物品、挥发性溶剂或高热源附近, 请将本产品放置在通风、阴凉、少尘的环境内。
2. 请勿在安装过程中使用其他产品电源线代替, 请使用本产品附带的电源线。
3. 定期在断电的情况下, 用干布清洁机身及激光模组。
4. 激光工作环境温度在 0℃–35℃, 严禁在零下温度运行, 避免在潮湿环境下使用本产品, 切勿在雷雨天气下使用本产品。
5. 如长时间不使用本产品, 请关闭本产品, 并断开电源线。
6. 本产品已连接电源时, 请勿用手或其他工具触碰电子相关区域。
7. 本产品运行时, 请勿触碰正在运动的机械机构及激光模组。
8. 雕刻前在工作平面上放置激光无法穿透的平面物体如铝合金或不锈钢板, 然后再放置加工材料。
9. 激光雕刻过程中, 请务必佩戴护目镜, 避免直视激光光斑带来的视力损伤。
10. 激光雕刻过程中可能会产生少许烟雾或气味, 建议在通风良好的环境下操作。
11. 年龄在 10 岁以下的儿童, 请勿在没有成人监督的情况下使用本产品, 以免造成人身伤害。

12. 准备好灭火器备用，定期维护和检查灭火器；严禁机器运行时无人看管；

13. 使用者应遵守设备所在地（使用地）相应国家、地区法律法规，恪守职业道德，注意安全义务，严禁将我司的产品或设备使用在任何非法用途上。如有违反者所应承担的相关法律责任我司概不负责。

For the purpose of engraving or cutting with a laser engraving machine, allow the workpiece to be exposed to the high-density laser beam emitted by the laser engraving machine. The workpiece may be subject to gasification without combustion as it is pretty hot on the surface. On the other hand, most workpieces are essentially combustible, which may be ignited, leading to an open flames and consequently to the machine breakdown and environmental contamination.

1. It is prohibited to store the machine in areas close to combustible and explosive substances, volatile solvents or source of heat. Instead, store it in a well-ventilated, cool and dust-free place;

2. Make sure that only the specific attached power cord rather than other similar power cords are used during installation;

3. Clean the tripod and laser module with a dry cloth regularly when the power is off.

4. Ensure to run the laser at 0°C-35°C. Operation at sub-zero temperature is prohibited; It is prohibited to run the machine under wet environment or in thunderstorm weather;

5. Switch off the machine if it is offline for an extended period of time, and unplug the power cord;

6. It is prohibited to come in contact with electronic areas with hands or other tools when the machine is connected to power supply;

7. Touching any moving parts and laser module while the machine is running is prohibited;

8. Before engraving, place a flat object that cannot be penetrated by the laser, such as an aluminum alloy or stainless steel plate on the workbench, and then place processing material.

9. Wear goggles to prevent vision damage arising from exposure to the laser spot during laser engraving operation;

10. It is advisable to run the machine under well ventilated condition as laser engraving may generate small amount of fume or gas;

11. Children under 10 years old are not allowed to run the machine without adult presence, which otherwise may lead to personal injury;

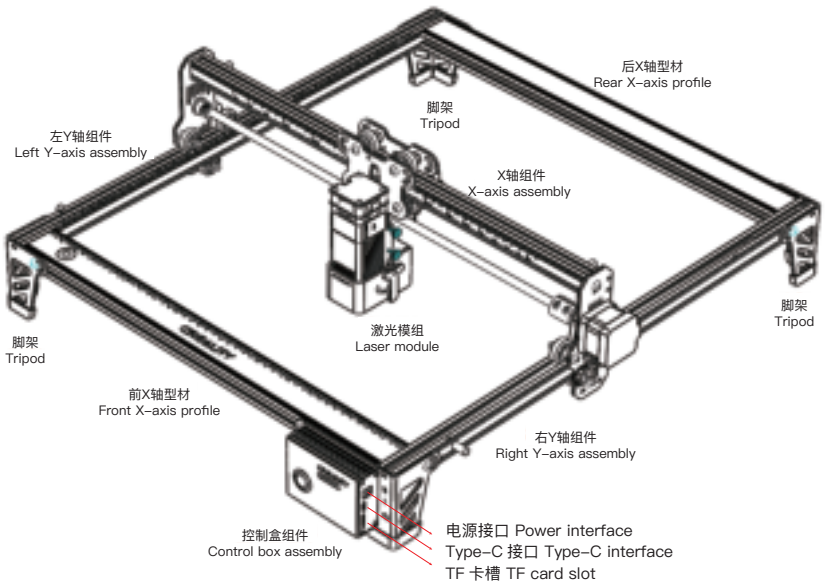
12. Put in place fire extinguishers in case of use, which shall be regularly checked. It is prohibited to keep the machine unattended while it is running;

13. Users should comply with the laws and regulations of the corresponding countries and regions where the equipment is located (used), abide by professional ethics, pay attention to safety obligations, and strictly prohibit the use of our products or equipment for any illegal purposes. Creality will not be responsible for any violators' legal liability under any circustance.

产品参数 Parameters

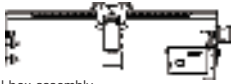
产品型号 Model	CR-Laser Falcon
产品尺寸 Machine size	568*632*198mm
产品净量 Net weight	3.2kg
操作系统 Operation system	Windows /MacOS
输入电压 Input	100-240V~ 50-60Hz
输出电压 Output	DC 24.0V 3.0A
工作温度范围 Range of operating temperature	0℃-35℃
安规认证 Safety certification	IEC60825、FDA、CE、ROHS、FCC、UKCA、UL 报告、PSE
雕刻尺寸 Engraving size	400mm*415mm
激光源 Laser source	半导体激光器 /Semiconductor laser unit
激光波长 Laser wave length	455±5nm
光功率 Laser power	5W/10W
安全等级 Safety class	Class I(FDA 分类标准 /FDA classification standard)
激光雕刻软件 Laser engraving software	LaserGRBL、LightBurn
文件格式 Format files	jpeg、jpg、png、bmp、svg、dxf
支持材料类型 Type of supporting materials	纸板、木板、竹板、橡胶板、皮革、织物、亚克力、漆面金属、塑料等 Cardboard, wood, bamboo, rubber, leather, fabric, acrylic, plastic, etc

设备简介 Equipment Intro



零部件清单 Parts List

1.X轴组件+控制盒组件
1.X-axis assembly & Control box assembly



2.前X轴型材*1
2.Front X-axis profile*1



3.后X轴型材*1
3.Rear X-axis profile*1



4.左Y轴组件*1
4.Left Y-axis assembly*1



5.右Y轴组件*1
5.Right Y-axis assembly*1



6.脚架*3
6.Tripod*3



7.激光模组*1
7.Laser module*1



8.电源适配器*1
8.Power adaptor*1



9.电源线
8.Power cord*1



10.木板*2
10.Linden plywood*2



11.M5*20内六角平圆头螺丝*18
11.M5*20 screws*18



12.T型船型螺母*6
12.T-shaped nuts*6



13.M1.5/M2/M2.5/M3 内六角扳手
13.M1.5/M2/M2.5/M3 Allen key



17.活性炭吸烟棉*2
17.Activated carbon smoke absorption cotton*2



14.开口扳手*1
14.Open wrench*1



18.黑色尼龙扎带*3
18.Black cable tie*3



15.TF卡&读卡器*1
15.TF card & card reader *1



19.无尘布*1
19.Dustless cloth*1



16.防护眼镜*1
16.Goggles*1



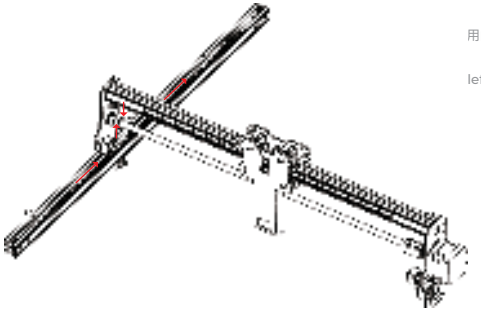
20.快速使用指南*1
20.Instruction manual*1



组装说明 Assemble directions

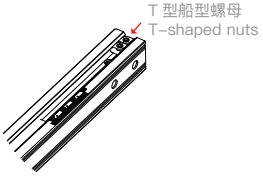
1. 安装左 Y 轴组件：将左 Y 轴组件(同步带朝上)穿过 X 轴组件，按图示方向穿好同步带：

Assemble the left Y-axis assembly:Pass the left Y-axis assembly (with the belt up) through the X-axis assembly and put on the belt in the direction shown in the figure:



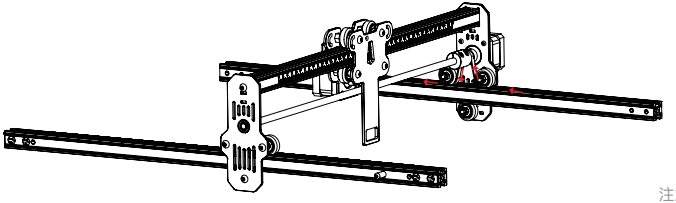
拉紧同步带，同时将两颗 T 型船型螺母嵌入左 Y 轴组件中，再使用内六角紧定螺钉锁紧同步带。

Tighten the belt, and insert two T-shaped nuts into the left Y-axis assembly.Then lock the belt with hexagon screw.



2. 安装右 Y 轴组件：方法同上。

Assemble the right Y-axis assembly and it is the same as above.

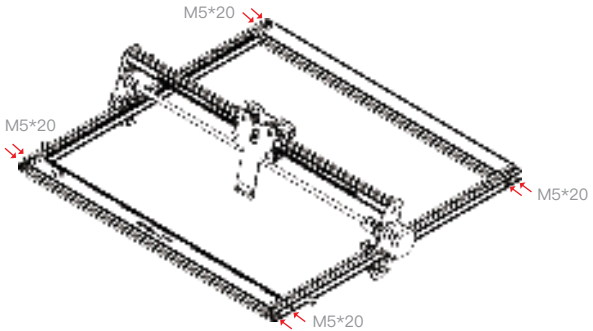




注意不能锁得太紧，防止皮带穿孔。
Not to lock too tightly to prevent the belt from perforating.

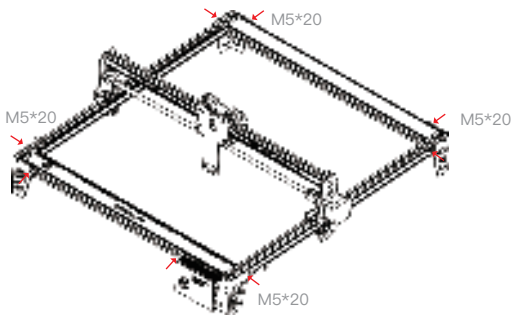
3. 安装前 X 轴型材与后 X 轴型材 , 一共使用 8 颗 M5*20 内六角平圆头螺丝锁紧。

Assemble rear X-axis profile and front X-axis profile：Lock with eight M5*20 screws.



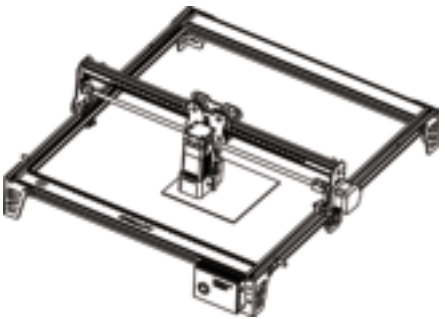
4. 安装三个脚架以及控制盒组件：一共使用 8 颗 M5*20 内六角平圆头螺丝锁紧。

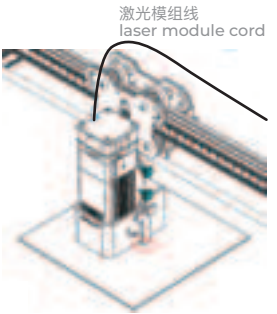
Assemble three tripods and control box assembly：Lock with eight screws.



5. 安装激光模组：将激光模组安装至固定板中，定焦条自然垂直向下时应与雕刻材料表面互相接触，最后使用右侧的手拧螺丝将其锁紧，并顺时针拨动定焦条直至被磁铁吸住。最后插上激光模组线。

Assemble the laser module：Assemble the laser module into the fixing plate and the fixed focus bar should contact with the surface of the processed material when it is naturally vertical downward.Finally lock it with two hand screws on the right and turn the fixed focus bar clockwise until it is attracted by the magnet.Finally plug in the laser module cord.





软件安装及使用 Software installation and usage guide

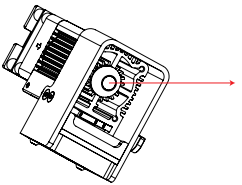
随机器附赠的 TF 卡中包含了 LightBurn 以及 LaserGRBL 的使用教程，您可以通过电脑从 TF 卡中获取相关信息。

The TF card that comes with the machine contains the tutorials of LightBurn and LaserGRBL.You can get the relevant information from the TF card.

开始雕刻 Start Engraving

机器支持 Type-C 实时工作和通过 TF 卡离线工作。无论您采用何种方式，**雕刻前请按照组装说明部分正确调焦，并使用无尘布搭配酒精擦拭激光模组的保护镜片，保证最佳雕刻效果。**

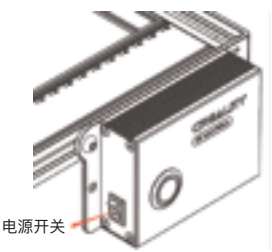
The machine supports real-time working by Type-C or offline working by TF card. **Please follow the assembly directions to focus correctly and wipe the protective lens of the laser module with dustless cloth and alcohol to ensure the best engraving effect.**

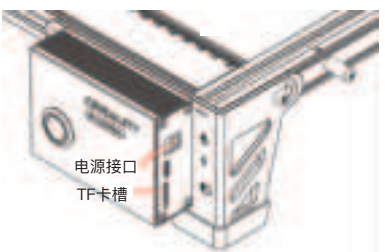


离线工作 Offline working

1. 上电前先将存有 .gcode 文件（机器默认读取 TF 卡中最新的 .gcode 文件，建议雕刻前把其它 .gcode 文件删除）的 TF 卡插入机器中，然后将配套的电源适配器一侧插入可远程开关的电源插座中，另一侧插入控制盒左侧电源接口。最后打开控制盒左侧的红色电源开关。

Insert the TF card with .gcode file(The machine reads the latest .gcode file in TF card by default. It is recommended to delete other .gcode files before engraving) into the machine before powering on, insert one side of the power adapter into the power socket that can be remotely switched on, and the other side into the power connector on the left side of the control box .Lastly, turn on the red switch on the left side of the control box.



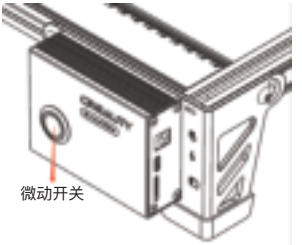


电源接通后，机器发出“滴 ... 滴 ... 滴”三声，机器进行初始化后进入待机模式，指示灯变成呼吸灯效果。

When power on, the machine emits "beep, beep, beep". After the machine is initialized, it enters the standby mode,and the indicator light turns into breathing state.

2. 按下微动开关，机器从待机模式进入预览模式，激光头会发出弱光，并围绕所加工图片的最大 X、Y 边缘重复运动，指示灯常亮。此时可以调整材料至合适位置。

Press the microswitch, it enters preview mode from standby mode, the laser head will emit weak light, and repeat movement around the largest X, Y edge of the processed picture with indicator light on. At this time, adjust the material to a suitable position.



预览模式下，再次按下微动开关，机器进入雕刻模式，此时激光头会发出强光，机器开始雕刻，指示灯常亮。

如果需要暂停雕刻，请按下微动开关，此时指示灯变成呼吸灯效果，再次按下微动开关可以继续雕刻。

如果需要取消雕刻，请长按微动开关 3 秒，机器会发出“滴”一声，随后机器复位，复位完成机器发出“滴 ... 滴”两声，进入待机模式，指示灯变成呼吸灯效果。

In preview mode, press microswitch again, it enters engraving mode. At this time, the laser head will emit strong light, the machine will start engraving with indicator light on.

Pause engraving: press the microswitch (or click “Pause” button in the software). At this time, the indicator light turns into breathing light. Press the microswitch again to continue engraving.

Cancel engraving: Please press and hold the microswitch for 3 seconds (or click “Cancel” button in the software), it will “beep” once, starts to reset, and “beep” twice after reset is completed. Enter standby mode, the indicator light turns into breathing light.

3. 雕刻完成后，机器会长“滴”三声，随后机器复位，复位完成机器发出“滴 ... 滴”两声，进入待机模式，指示灯变成呼吸灯效果。

After engraving is completed, it will “beep” three times and reset. After reset completed, it “beep” twice, enters standby mode, and the indicator light turns into breathing light.

在线工作 Real-time working

关于 Type-C 实时工作，请参考 TF 卡中的随机资料。

For real-time working by Type-C, please refer to the tutorial in the TF card.

指示灯状态说明 Indicator Status

1. 指示灯灭：机器处于断电状态，或上电异常。

2. 呼吸灯效果：机器处于待机模式，可按下微动开关进入预览模式或雕刻模式。

3. 指示灯闪烁：机器处于升级模式或异常模式，同时蜂鸣器发出急促的响声，等待升级完成或清除异常后自动进入待机模式。

4. 指示灯常亮：机器处于预览模式或雕刻模式，此时激光头处于出光状态，需格外注意安全。

1.Light off: The machine is in a power-off state, or the power is abnormal.

2.Breathing light: The machine is in standby mode, you can press the microswitch to enter preview mode or engraving mode.

3.Light flashes: the machine is in upgrade mode or abnormal mode, and the buzzer beeps rapidly, and it will automatically enter standby mode after the upgrade is completed or the abnormality is cleared.

4.Light always on: the machine is in preview mode or engraving mode. The laser head is working, please pay attention to safety

异常处理 Exception Handling

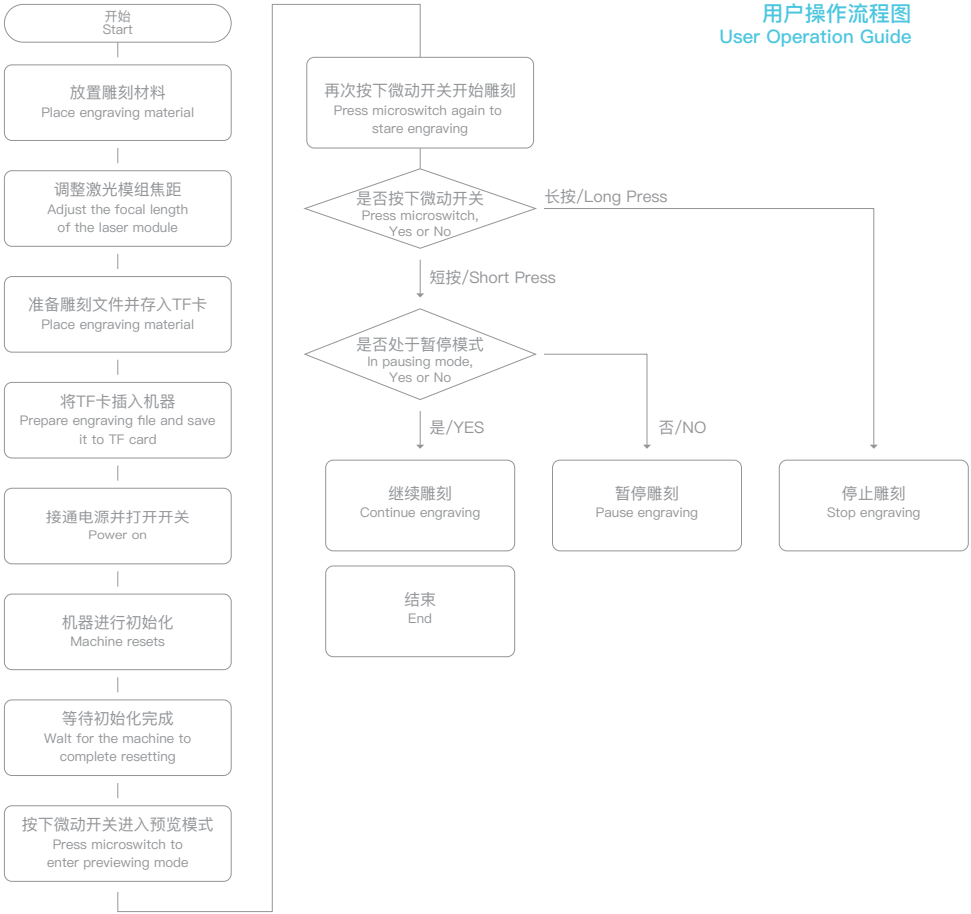
1. 在预览模式以及雕刻模式中，如果机器发生侧翻异常或移动，机器会关闭激光，电机停止运动，指示灯闪烁，同时蜂鸣器发出急促响声进行报警。

处理办法：请将机器恢复至原来位置，清除异常后按下机器控制盒上的微动开关继续预览或雕刻。

In preview mode and engraving mode, if the machine turn on it side or moves, it will turn off the laser. Motor stops moving, indicator light flashing, and buzzer emits alarm.

Solution: Please move the machine to its original position and press microswitch on the machine control box to continue previewing or engraving after clearing abnormality.

用户操作流程图
User Operation Guide



产品保修卡

产品寄回前请先联系售后专员，为正常进行售后处理，请务必填写此卡，并随机器寄回。

返修 ☐　　换货 ☐　　退货 ☐

客户名称：_____联系电话：_____

收件地址：_____

_____

_____

机器制造编码：_____订单编号：_____

购买渠道：电商平台 ☐　　线下 ☐

购买日期：_____年_____月_____日

故障描述或退、换货原因和建议：

_____

_____

_____

_____

维修情况记录：

_____

_____

_____

温馨提示：基本信息及返厂原因为客户必填项，维修情况记录部分为维修人员填写项。

WARRANTY

Before returning the product and filling in a warranty, please contact after-sale person for going through after-sale formality.And attach this warranty card along with the returned machine.

Repair ☐　　Change ☐　　Return ☐

Name: _____Telephone: _____

Address: _____

_____

_____

Serial Number: _____Order Number: _____

Channel: Platform ☐　　Offline ☐

Date of purchase Day_____Mon._____Year_____

Malfuction And Damage Depiction Or Return And Change Reasons\Suggestions:

_____

_____

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Repair Records:

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Note: Client need filling in basic infor.and return reasons.Repair records shall retain for technicians.

※ 使用者应遵守设备所在地(使用地)相应国家、地区法律法规, 恪守职业道德, 注意安全义务, 严禁将我司的产品或设备使用在任何非法用途上。如有违反者所应承担的相关法律责任我司概不负责。

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※ Users should abide by the laws and regulations of the country and region where the equipment is located (place of use), abide by professional ethics, and pay attention to safety obligations. It is strictly forbidden to use our products or equipment for any illegal purpose.Our company is not responsible for the relevant legal responsibilities that the violator should bear.

※ Since each model is different, the actual product may be different from the picture. Please refer to the actual product. The final interpretation right belongs to Shenzhen Chuangxiang 3D Technology Co., Ltd.

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