

# 操作手册

Operating Manual

## ST300 吊顶式LED黑光灯

ST300 Stationary Inspection LED UV Lamp



件号/Part Number:  
645005

## 简体中文

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## ENGLISH

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## 前言

感谢您购买美国磁通MAGNAFLUX ST300 吊顶式LED黑光灯。美国磁通致力于提供业界最高等级的无损检测产品。ST300黑光灯产生波长小于可见光谱里蓝紫色光的紫外线。该紫外线通过特制的UV-LED发光二极管组产生。它们产生的紫外线的波长在365nm~370nm之间，而峰值辐射波长约为365nm，在UV-A波长范围内，而不会产生任何危险的UV-B和UV-C紫外线。ST300黑光灯可用于无损检测的荧光渗透探伤和荧光磁粉探伤中对裂纹等表面缺陷的识别，亦可用于这些无损检测的清洗工序中判别清洗是否达到要求。

## 防范措施

使用前请检查本产品。如外壳或线缆发现损坏，我们建议您将本产品寄送至美国磁通授权服务中心进行维修。

	<p><b>注意</b> 紫外光辐射源。UV-A风险等级组别2。</p>
	<p><b>注意</b> 使用时请佩戴UV防护眼镜。使用时请注意保持在最小工作距离以外。</p>
	<p><b>警告</b> 请勿将黑光灯浸入到任何液体中。必须连接接地电源。</p>
	<p><b>注意</b> 请勿暴力使用线缆。不要通过线缆提起黑光灯，不要猛拉插头线缆脱离插座。请勿用线缆拉拽黑光灯。不要通过拉扯线缆使黑光灯悬空。</p>

## 产品清单

名称	数量*
ST300 LED 黑光灯	1台
ST300 LED 黑光灯遥控器及线缆	1台
ST300 LED 黑光灯电源线	1根
ST300 测试报告	1份
ST300 操作手册	1份

\* 注：如多台拼接，需另行选配#645008 ST300拼接套装

ST300拼接套装包换串联电源线、串联固定板和串联固定柱。一套拼接套装可拼接两台ST300。

## 技术说明

最大辐照强度 (距离38 cm处)	最大:7,000 $\mu\text{W}/\text{cm}^2$ (100%照度比例) 出厂设置:4,800 $\mu\text{W}/\text{cm}^2$
波长峰值	365 $\pm$ 5 nm
UV-A 辐照范围 (距离38 cm处)	椭圆形覆盖面, 80 cm x 40 cm (最高亮度为7000微瓦/平方厘米时测得) $\geq 1,000 \mu\text{W}/\text{cm}^2$
激发光谱 半峰值时的全宽度 (FWHM) 半峰值时的最大波长 (LWHM) 半峰值时的宽度偏差 (+/-)	$\leq 15$ nm $\leq 377$ nm $\leq \pm 15$ nm
激发光谱波长范围的辐射强度 (347-383 nm)	$\geq 2,000 \mu\text{W}/\text{cm}^2$
波长漂移(高温条件)	$\leq 5$ nm
最小工作距离	$\leq 25$ cm
工作距离	20-120 cm
紫外光强度可调范围:	30~100%
紫外光强度调节步长:	1%
黑光模式下白光照度 (400-760 nm)	$\leq 2$ 英尺烛光 / 20 lux (距离38 cm处)
可切换白光模式	是
白光亮度可调范围	40~100%
电流纹波	$\leq 5\%$
运行环境	10-50°C
稳定时间 (环境条件相关)	10 分钟
防护等级	IP65
最高环境温度	$\leq 50^\circ\text{C}$
控制器线缆长度	1.5 m
电源线长度	3 m
重量	5.9 kg
输入电源 适用范围	100-240 VAC +/- 10%
尺寸	44.8cm X 23.0cm X 16.5cm (长x宽x高)
重量	5.9kg
最大可拼接台数	3台
多台拼接方式	串联连接
多台拼接需要电源数量	1路输入

## 操作指南

## I. 硬件连接

1. 将电源线与黑光灯连接。注意连接器的方向以免针脚受损。
2. 将控制器线缆与黑光灯连接。注意连接器的方向以免针脚受损。
3. 将黑光灯接上电源。
4. 使用控制盒上的旋转开关开启黑光灯。

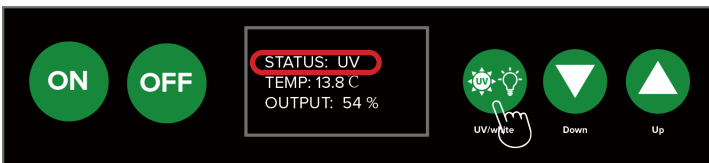
## II. 黑白光切换以及亮度调节

1. 接通电源, 在线控器上按选“ON”按钮, 显示开机画面, 1.5秒后进入工作模式, 默认进入UV-A紫外光模式。如下图:

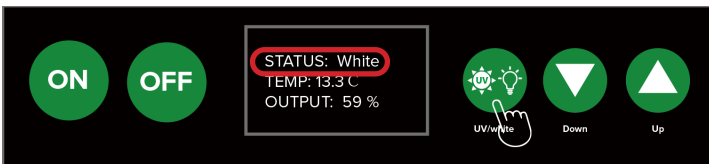


2. 数显示屏中的“STATUS:”指示当前打开的灯光是UV (紫外光) 或者LIGHT (白光), 通过线控器上“UV/LIGHT”按钮可切换UV-A紫外光和白光模式, 如下图:

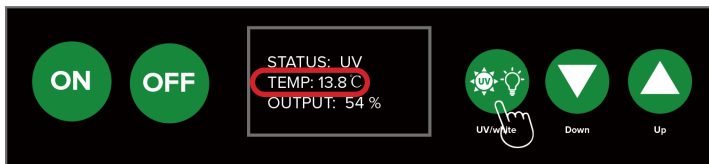
UV-A模式:



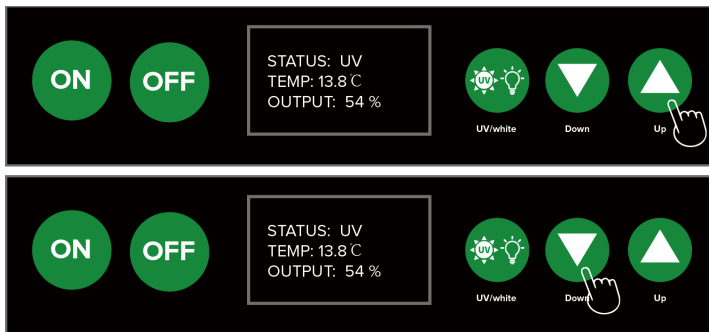
白光模式:



3. 数显示屏中的“TEMP”显示当前灯体内部的实时温度, 在设备超温时, 会报警, 并自动关闭黑光灯。如下图:



4. 数显示屏中的“OUTPUT”显示当前紫外光设定的比例。在紫外光模式下, 可通过“UP”和“DOWN”按钮调整紫外辐照度的百分比, “UV”可以设置范围为30-100%; 在白光模式下, “LIGHT”可设置范围为40-100%。按“OFF”按键关闭设备后可并保存当前设置的百分比, 如有修改后异常断电的则无法保存当前的设定。

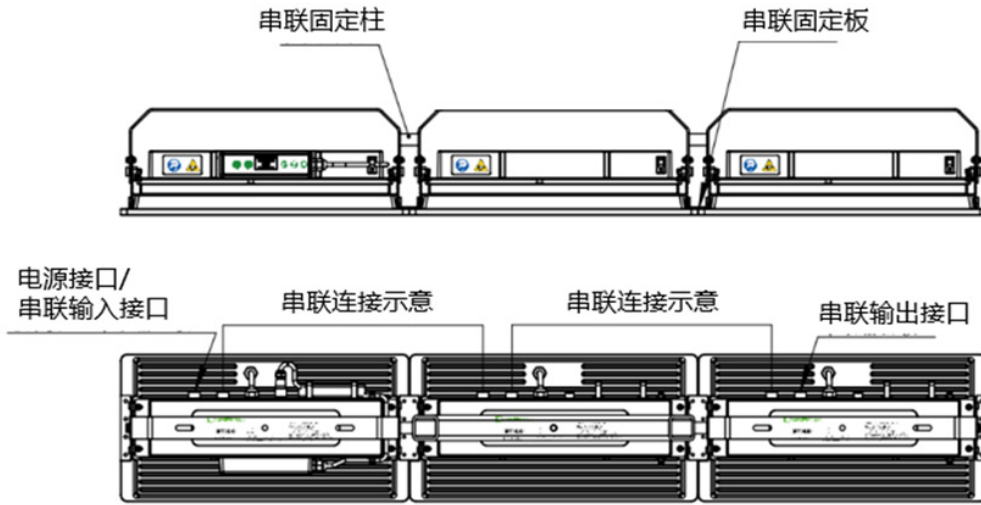


提示: 黑光强度会在黑光灯开启后即达到最高, 并在10分钟内进入稳定状态。ST300 可以满足不间断的使用; 但是在不使用时, 适当关闭黑光灯可在一定程度上延长UV LED的使用寿命。

### III. 串联说明

ST300 LED 黑光灯可支持3台同型号的灯组串联，共用一个电源输入和线控器，以实现更大的照射范围。

1. 包含主控灯在内最多可以支持3台ST300 LED黑光灯的串联3台。
2. 串联模式下仅主控灯采用220V外接电源供电，其余两台附属ST300 LED黑光灯通过与主控灯相连的串联电缆供电，不需要额外的供电输入。
3. 串联的第二台灯以及第三台灯由上一台灯的电源输出接口连到本体的输入接口，电源连接线需另行选配。
4. 串联需要单独购买串联电缆及串联固定柱、串联固定板以确保黑光灯固定在同一水平面上。
5. 串联使用时仅主控灯线控器有效，由主控灯的线控器控制所有灯体；且需要断开附属灯体与其自身线控器的连接。同时插上多个线控器时会导致所有灯体不工作或处于异常状态。
6. 请使用磁通配套的串接组件进行准确的串联（串接组件需另行选配）。
7. 正确串联（三台）方式如下图所示：



### 维护

- 使用较准过的黑光强度计 (320-400 nm 范围) 定期检查UV-A辐照强度。应将黑光强度计探头放置在距离黑光灯滤光片表面 38 cm 处测得读数。探头应始终放置在辐照范围内的同一位置，在时间变化的同时跟踪记录读数。
- 检查LED滤光片上灰尘或检测耗材是否有堆积。定期清洁可防止UV-A强度衰减。
- 如有必要，使用柔和的清洗剂和湿毛巾清洁黑光灯外壳；不能使用溶剂、酸类或碱类。
- 设备具有超温报警及自动保护功能，在温度超出LED灯泡使用温度范围时，会提示超温报警，并自动进入保护状态，请在设备冷却一段时间后再行开机。
- 请勿刻意向黑光灯喷水或将任何部件浸入液体中。
- 对于LED(发光二极管)的故障，务请联系制造厂商。所有LED(发光二极管)的修理和更换工作必须返厂进行。
- 避免(直接)拉拔连接电缆。
- 盘卷好该电缆避免缠乱打结。



### 滤光片清洁

请注意：因为需要为保证ST300的IP防护等级，LED灯体下盖板与滤光片是一个保护盖必须作为整体更换。UV紫外滤光片和白光滤光片不可单独更换。如需更换滤光片请联系磁通中国售后服务。

1. 断开黑光灯电源。
2. 使用 M5\*12 内六角扳手，卸下滤光片保护盖LED灯体下盖板的螺丝。
3. 取下滤光片保护盖，请注意不要损坏LED阵列和内部电路。
4. 安装新滤光片保护盖。请用湿布擦拭滤光片，切勿用有机溶剂清洁滤光片。
5. 清洁完之后，将灯盖整体装回灯体下方。
6. 紧固内六角螺丝。建议将螺丝全部先旋入，再一同拧紧，可以确保滤光片保护下盖和垫圈灯体安装齐整。

提示：几乎不需要使力的情况下旋入螺丝直到无法转动，然后再拧紧1/8圈。

### 维修

	<p><b>注意</b></p> <p>为保证产品安全可靠，检修应由美国磁通授权服务中心执行，并使用原装部件。</p>
	<p><b>警告</b></p> <p>LED组件为静电敏感材质，可能因不当处理而永久损坏。所有LED组件的更换必须由美国磁通授权服务中心执行。未经授权的检修行为将使质保失效。</p>

### 由UV辐照引起的危险

重要信息：尽管是低辐照暴露，健康风险也不排除因长期暴露于紫外线导致的例如皮肤发红或色素沉着现象。

风险评估取决于下列因素：

- 暴露时间
- 辐照强度
- UV-LED 灯的发射光谱

由于强烈光照相当低的穿透性，在工作场所的健康危害主要是对眼睛和皮肤。特别是检查人员的双手和眼睛可能受到影响。

紫外线辐照能引起皮肤和眼睛的损害。请见如下建议：

- 不要直接迎视UV-LED灯紫外线光。
- 绝对不要使用如放大镜、望远镜和显微镜这样的光学聚焦装置来迎视紫外线光线(关于这点，校正玻璃不属于光学聚焦装置)。
- 不要将UV-LED灯紫外光线直射其他人。
- 总是将UV-LED灯置于人眼高度以下
- 避免皮肤接触。穿戴合身工作服和手套(或涂具有防护高紫外线辐照作用的合适乳液)。

只有经过培训人员才能进入黑光灯有效照射区域。

佩戴合适的紫外线防护眼镜。由于UV-LED灯发出紫外线的反射，即使不直视该灯泡，眼睛也可能受到损害。

只有授权和经培训的人员才能允许进入工作场所。

灯具的使用者应该用文件确定并标识暴露辐照增加的区域。他们应保证：

- 只有经授权和培训的人员才能进该区域工作。
- 不要超过对人体部分规定的暴露值。
- 使用个人防护装置来避免过量暴露。

### 紧急处置

在紧急情况下, 关断灯具的电源, 并拔下插头。然而即使主开关已关, 灯具内部还有电压。

如发现电气设备有缺陷或损坏, 应立即关断电源开关。立即拔掉受损灯具电源插头并停止其继续使用。

### 备件和易损件

使用第三方厂商供应的备件和用过的零件是危险的。只能使用该灯具制造厂商生产的零件或许可代用的零件。

灯具制造厂商对未被认可的备件和旧零件的使用不承担责任, 这样做将使此灯的质保证书失效。

## 质保

参见美国磁通质保声明, 官方网站 [www.magnaflux.cn](http://www.magnaflux.cn)。

## 支持

如果对于您的ST300有任何操作或维修方面的问题, 请通过以下方式联系美国磁通:

4000 686 980

[infochina@magnaflux.com](mailto:infochina@magnaflux.com)

[www.magnaflux.cn](http://www.magnaflux.cn)

您也可以直接联系当地的代理商或美国磁通授权服务中心; 具体联系方式请访问官网: [www.magnaflux.cn](http://www.magnaflux.cn)



## 故障排除

故障	可能原因	校正方案
黑光灯无法点亮	未接通电源	确认电源线与插座正确连接。 确认电源线与黑光灯已正确连接。 确认控制开关线缆与黑光灯已正确连接。
	电源线损坏或失效	检查电源线。如有损坏则更换。
	控制开关线缆损坏或失效	检查控制开关线缆。如有损坏则更换。
	控制开关损坏或失效	检查控制开关。如有损坏则更换。
	内部故障	请联系美国磁通授权服务中心。
黑光灯只能在UV或白光中的一种模式下正常工作, 另一种模式下不工作	控制开关线缆损坏或失效	检查控制开关线缆。如有损坏则更换。
	控制开关损坏或失效	检查控制开关。如有损坏则更换。
	LED 驱动故障	请联系美国磁通授权服务中心。
一个或多个LED 无法点亮	LED 芯片故障	请联系美国磁通授权服务中心。
UV 辐照强度大幅下降	滤光片被污染	清洁 LED 保护盖和滤光片。
	检测距离不一致	使用校准后的黑光强度计, 将探头始终放置在距离黑光灯滤光片38 cm 处测量。
	LED故障	请联系美国磁通授权服务中心。
黑光模式下可见光测量值大于2 FC / 20 lux	可见光强度计测量范围不适用	使用校准过的, 符合 ASTM E2297 标准中规定的可见光测量范围 (400-760 nm) 的可见光强度计。
	检测距离不一致	使用校准后的可见光强度计, 将探头始终放置在距离黑光灯滤光片38 cm 处测量。
	滤光片被污染	清洁 LED 滤光片。详见 <a href="#">维护</a> 。
	滤光片损坏	更换LED 滤光片。
	LED 故障	请联系美国磁通授权服务中心。

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# Operating Manual

## ST300 Stationary Inspection LED UV Lamp







Part Number:  
645005

## Preface

Thank you for purchasing the MAGNAFLUX ST300 overhead LED black light. MAGNAFLUX is committed to providing the highest level of non-destructive testing products in the industry. The ST300 lamp produces UV light with a wavelength smaller than the blue-violet light in the visible spectrum. This UV light is generated by a specially designed UV-LED light-emitting diode group. The wavelength of ultraviolet rays produced is between 365nm and 370nm, and the peak radiation wavelength is about 365nm, which is within the UV-A wavelength range without producing any dangerous UV-B and UV-C ultraviolet rays. The ST300 black light lamp can be used to identify surface defects such as cracks in fluorescent penetrant inspection and fluorescent magnetic particle inspection for non-destructive testing. It can also be used in the cleaning processes of these non-destructive testing to determine whether the cleaning meets the requirements.

## Precautions

Please inspect this product before use. If the casing or cable is found to be damaged, we recommend that you send this product to MAGNAFLUX Authorized Service Center for repair

	<p><b>Notice</b> UV radiation source. UV-A risk level group 2.</p>
	<p><b>Notice</b> Please wear UV-proof glasses when using. Please be careful to keep beyond the minimum working distance when using it.</p>
	<p><b>Warning</b> Do not immerse the lamp in any liquid. A grounded power source must be connected.</p>
	<p><b>Notice</b> Do not use the cable violently. Do not lift the blacklight by its cord and do not yank the plug cord out of the outlet. Do not pull the blacklight by its cable. Do not leave the blacklight hanging by stressing the cable.</p>

## Packing List

Item	Quantity*
ST300 Stationary Inspection LED UV Lamp	1 PC
ST300 UV-A/Brightness Controller	1 PC
ST300 Power Cable	1 PC
ST300 Test Report	1 PC
ST300 Operating Manual	1 PC

\*Note: If multiple units are spliced, #645008 ST300 splicing kit is required.

The ST300 splicing kit (P/N: 645008) includes one series power cord, one fixing plate and one fixing post. One splicing kit can splice two ST300s.

## Technical Parameters

Maximum irradiation at 15 in / 38 cm	Maximum: 7,000 $\mu\text{W}/\text{cm}^2$ (100% illumination ratio) Default setting: 4,800 $\mu\text{W}/\text{cm}^2$
Peak Wavelength	365 $\pm$ 5 nm
UV-A Beam Profile at 15 in / 38 cm	Oval Shape Coverage 80 cm x 40 cm $\geq 1,000 \mu\text{W}/\text{cm}^2$
Excitation Spectrum Full Width at Half Maximum (FWHM) Maximum Wavelength at Half Maximum (LWHM) Width Deviation at Half Maximum	$\leq 15$ nm $\leq 377$ nm $\leq \pm 15$ nm
Radiation Intensity in the Excitation Spectral Wavelength Range (347-383 nm)	$\geq 2,000 \mu\text{W}/\text{cm}^2$
Wavelength Drift (High Temperature Conditions)	$\leq 5$ nm
Minimum Working Distance	$\leq 25$ cm
Working Distance	20-120 cm
UV Light Intensity Adjustable Range:	30~100%
UV Light Intensity Adjustment Step Size:	1%
White Light Illuminance in UV Mode (400-760 nm)	$\leq 2$ footcandles / 20 lux (at 15 in / 38 cm)
White Light Mode	Yes
White Light Brightness Adjustable Range	40~100%
Current Ripple	$\leq 5\%$
Operating Environment	10-50°C
Stabilization Time (Depending on Environmental Conditions)	10 min
IP Level	IP65
Maximum Ambient Temperature	$\leq 50^\circ\text{C}$
Controller Cable Length	1.5 m
Power Cord Length	3 m
Weight	5.9 kg
Input Power Supply Scope of Application	100-240 VAC $\pm$ 10%
Size	44.8cm X 23.0cm X 16.5cm (LxWxH)
Weight	5.9kg
Maximum Number of units that can be Spliced	3
Multiple Splicing Methods	Series Connection
The Number Of Power Supplies Required for Splicing Multiple Units	1 Power Supply

## Operating Guide

### I. Hardware Connection

1. Connect the power cord to the lamp. Pay attention to the direction of the connector to avoid pin damage.
2. Connect the controller cable to the lamp. Pay attention to the direction of the connector to avoid pin damage.
3. Connect the lamp to the power supply.
4. Press the "ON" button on the controller to turn on the black light.

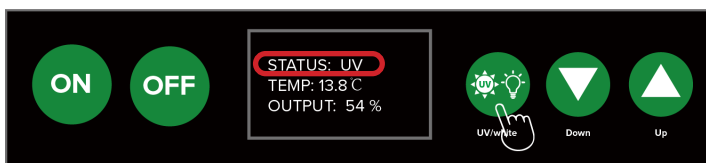
## II. Black and white light switching and brightness adjustment

1. Turn on the power, press the “ON” button on the controller to display the startup screen. After 1.5 seconds, it will enter UV-A ultraviolet light mode by default. As shown below:

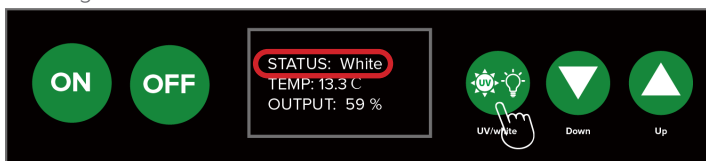


2. “STATUS”: in the digital display screen indicates that the currently turned on light is UV (ultraviolet light) or white light. You can switch between UV-A ultraviolet light and white light mode through the “UV/White” button on the wire controller, as shown below :

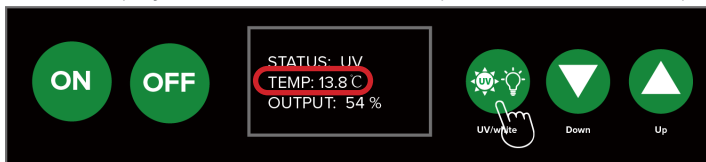
UV mode:



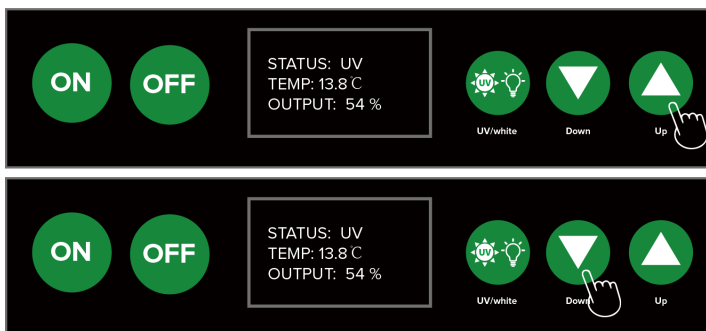
White light mode:



3. “TEMP” displays the current real-time temperature inside the lamp body. When the device overheats, an alarm will be



4. “OUTPUT” in the digital display shows the current UV setting ratio. In UV mode, the percentage of UV irradiance can be adjusted through the “UP” and “DOWN” buttons. “UV” can be set in the range of 30%-100%; in white light mode, “White” can be set in the range of 40%-100%. Press the “OFF” button to turn off the device and save the current setting percentage. If there is an abnormal power outage after modification, the current setting cannot be saved.

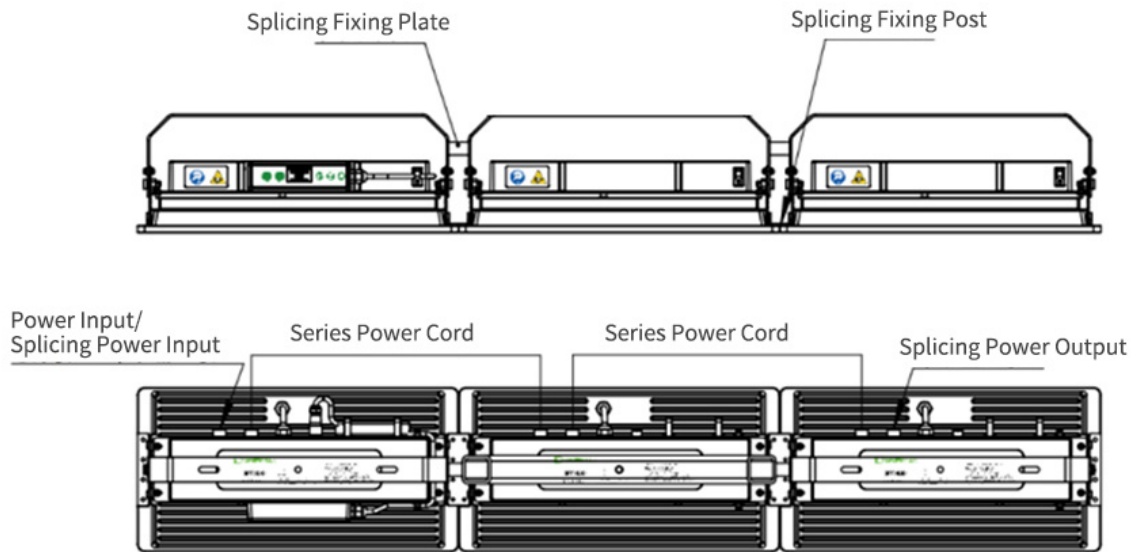


*Tip: The UV irradiation will reach the highest level after the lamp is turned on, and will enter a stable state within 10 minutes. ST300 can meet the needs of uninterrupted use. when not in use, properly turning off ST300 can extend the service life of the UV LED to certain extent.*

### III. Splicing

Up to 3 units of ST300 can be spliced in series, sharing a power input and the controller to achieve a larger illumination range.

1. Including the main control light, up to 3 units of ST300 can be spliced in series.
2. In series mode, only the main control lamp is powered by a 100-240VAC power supply, and the other two ST300s LED black light lamps are powered by the series cable connected to the main control lamp. No additional power input is required.
3. The second lamp spliced in series is powered by the power cord connected from the power output interface of the main control lamp. The third lamp spliced in series is powered by the power cord connected from the power output interface of the second lamp.
4. If splicing is required, please purchase a Splicing kit (P/N:645008) separately, which includes a series power cord, fixing plates and fixing posts needs to be ordered. One splicing kit can splice two ST300 lamps.
5. When used in splicing mode, only the controller of the main control lamp comes into effect. Make sure unplugging the controllers of the auxiliary lamps, otherwise it will cause the failure of all lamps. .
6. When used in splicing mode, the splicing kit is recommended.
7. The correct way to splice three units is as shown in the figure below:



### MAINTENANCE

- Regularly check UV-A radiation intensity using a calibrated black light radiometer (320-400 nm range). The black light intensity meter probe should be placed 15in/38cm from the LED filter surface and the reading should be taken. The probe should always be placed at the same location within the irradiation range and the readings should be tracked over time.
- Check whether there is dust on the LED filter. Regular cleaning prevents UV-A intensity from fading.
- If necessary, use mild detergent and a damp towel to clean the blacklight housing; do not use solvents, acids or alkalis.
- The device has overheat alarm and automatic protection functions. When the temperature exceeds the operating temperature range of the LED bulb, an overheat alarm will be prompted and the device will automatically enter the protection state. Please wait for the device to cool down for a period of time before turning it on again.
- Do not spray water on the device or immerse any parts in liquid.
- For LED failures, please contact the manufacturer. All LED repairs and replacements must be returned to the factory.
- Avoid directly pulling connecting cables.
- Coil the cable to avoid tangles and knots.





## FILTER CLEANING

Please note: To ensure the IP protection level of the ST300, the lower cover of the LED lamp body and the filter are a protective cover and must be replaced as a whole. The UV filter and white light filter cannot be replaced separately. If you need to replace the filter, please contact Magnaflux China After-Sales Service.

1. Disconnect the device from the power supply.
2. Use an M5\*12 hex wrench to remove the screws on the filter protective cover.
3. Remove the filter protective cover. Be careful not to damage the LED array and internal circuitry.
4. Install the new filter protective cover. Wipe the filter with a damp cloth. Do not use organic solvents to clean the filter.
5. After cleaning, reinstall the entire lamp cover under the lamp body.
6. Tighten the hexagon socket screws. It is recommended to screw in all the screws first and then tighten them together to ensure that the filter protection lower cover and gasket lamp body are installed neatly.

*Note: Use almost no force to tighten the screw until it stops, then tighten an additional 1/8 circle.*

## REPAIR

	<p><b>Notice</b></p> <p>To ensure product safety and reliability, maintenance should be performed by a Magnaflux Authorized Service Center and use original parts.</p>
	<p><b>Warning</b></p> <p>LED components are made of static-sensitive materials and may be permanently damaged by improper handling. All LED component replacement must be performed by a Magnaflux Authorized Service Center. Unauthorized maintenance will void the warranty.</p>

### Hazards caused by UV radiation

IMPORTANT: Despite the low radiation exposure, health risks do not exclude phenomena such as skin redness or pigmentation caused by long-term exposure to UV rays. Risk assessment depends on the following factors:

- Exposure time
- Irradiation intensity
- Emission spectrum of UV-LED lamps

Due to the rather low penetration of intense light, health hazards in the workplace are mainly to the eyes and skin. In particular, the examiner's hands and eyes may be affected.

Ultraviolet radiation can cause skin and eye damage. Please see the following suggestions:

- Do not look directly into the ultraviolet light of UV-LED lamps.
- Never use optical focusing devices such as magnifying glasses, telescopes and microscopes to view UV light (for this purpose, corrective glass is not an optical focusing device).
- Do not direct the UV light of the UV-LED lamp to other people.
- Always place UV-LED lights below eye level
- Avoid skin contact. Wear appropriate clothing and gloves (or apply a suitable lotion that protects against high UV radiation).

Only trained personnel can enter the area effectively illuminated by black light.

Wear appropriate UV protective glasses. Due to the reflection of ultraviolet light emitted by UV-LED lamps, your eyes may be damaged even if you do not look directly at the lamp bulb. Only authorized and trained personnel should be allowed access to the workplace.

Users of ST300 should document and identify areas of increased radiation exposure. They should ensure:

- Only authorized and trained personnel are allowed to work in this area.
- Do not exceed exposure values specified for human body.
- Use personal protective equipment to avoid excessive exposure.

## EMERGENCY

In an emergency, turn off the power to the lamp and unplug it. However, even if the main switch is turned off, there is still voltage inside the lamp.

If electrical components are found to be defective or damaged, the power switch should be turned off immediately. Unplug the lamp and stop use.

## SPARE PARTS AND WEARING PARTS

Using spare and used parts from third-party manufacturers is dangerous. Only use parts produced by the lighting manufacturer or approved substitute parts. The manufacturer of the lamp is not responsible for the use of unapproved spare parts and used parts, which will invalidate the warranty for this lamp.

## WARRANTY

Please refer to the Magnaflux Warranty Statement, official website [www.magnaflux.com](http://www.magnaflux.com).

## SUPPORT

If you have any operating or maintenance questions about your ST300, please contact Magnaflux at:

+1 847-657-5300

[cs@magnaflux.com](mailto:cs@magnaflux.com)

## TROUBLE SHOOTING

Fault	Possible Reasons	Solution
Black light fail to light up	Not connected to power	Make sure the power cord is properly connected to the outlet. Make sure the power cord and the lamp are connected correctly. Make sure the control switch cable and the lamp are connected correctly.
	Damaged or failed power cord	Check the power cord. Replace if damaged.
	Controller cable is damaged or failed	Check the controller cable. Replace if damaged.
	Controller is damaged or failed	Check the controller. Replace if damaged.
Black light can only work properly in one mode of UV or white light, but not in the other mode	Internal failure	Please contact a Magnaflux Authorized Service Center.
	Controller cable is damaged or failed	Check the controller cable. Replace if damaged.
	Controller is damaged or failed	Check the controller cable. Replace if damaged.
One or more LEDs fail to light up	LED driver failure	Please contact a Magnaflux Authorized Service Center.
	LED chip failure	Please contact a Magnaflux Authorized Service Center.
UV radiation drops significantly	The filter is contaminated	Clean the LED protective cover and filter.
	Detection distance is inconsistent	Using a calibrated black light intensity meter, always place the probe 38 cm away from the black light filter for measurement.
	LED failure	Please contact a Magnaflux Authorized Service Center.
The visible light measurement value in UV mode is greater than 2FC/20lux	Visible light intensity meter measuring range not applicable	Use a calibrated visible light intensity meter that meets the visible light measurement range (400-760 nm) specified in the ASTM E2297 standard.
	Detection distance is inconsistent	Using a calibrated visible light intensity meter, always place the probe 38 cm away from the black light filter for measurement.
	The filter is contaminated	Clean the LED filter. See <a href="#">Maintenance</a> for details.
	Filter damaged	Replace the LED filter.
	LED failure	Please contact a Magnaflux Authorized Service Center.

## COPYRIGHT

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