

Intelligent UV & OZONE Sterilization Case PLUS

UVP401R



2
years
warranty



UVC LED



Wavelength
275nm UVC



120°



Center box
Irradiance: 300 μ W/cm²



60mg/m³
27ppm



10.95V/8000mAh
Li-ion



UV: 4.5h
O₃: 15h



3-4h



IP65



365x297x168mm



4.2 kg



12.6V --- 4.3A

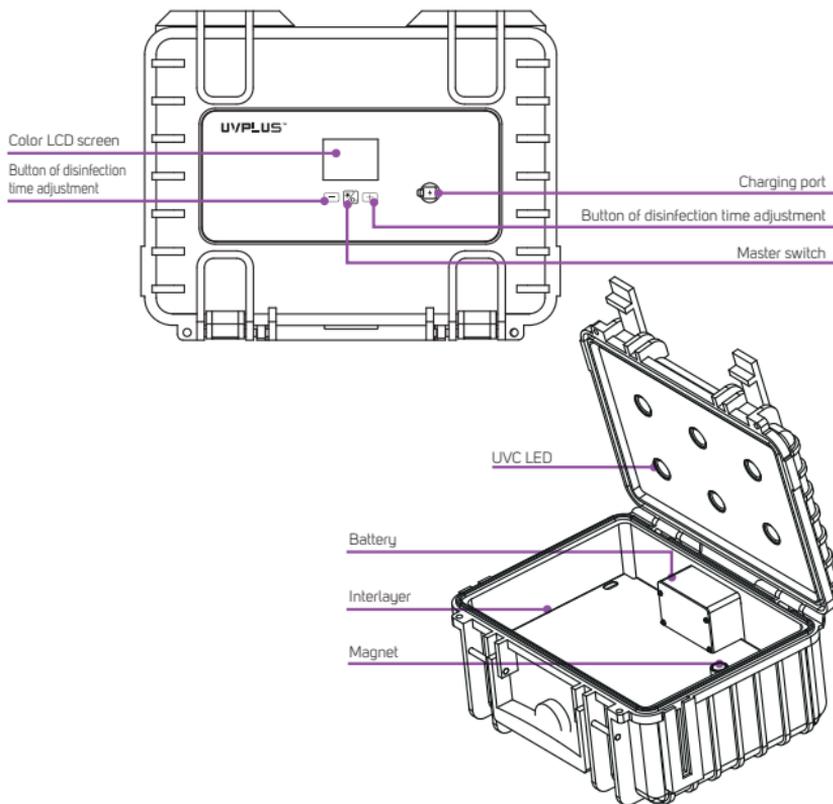


MAX 25W

Product Features:

- Double-effect disinfection combination, fully reflect the high efficiency of ULTRAVIOLET disinfection and 360° no blind angle of OZONE disinfection
- The inner upper cover and bottom of disinfection case are respectively equipped with 6pcs UVC LEDs so as to realize the overall disinfection of articles
- The inside of disinfection case is equipped with the interlayer, which can increase the disinfection area to the backside of articles
- The design of Hall Switch for the disinfection case, opening the case will automatically stop the disinfection work, which can effectively avoid the damage of ultraviolet or ozone to human body
- With the intelligent button operation interface, it is able to independently select and adjust the disinfection mode and disinfection time
- Color LCD screen can display the information e.g. disinfection mode, disinfection time and state of charge etc. in real time
- The external case is under the German Quality with strong corrosion resistance and shock resistance, IP65 dust and water resistance, easy to carry
- The disinfection case has the memory function. After starting the machine each time, the screen will display the mode and time of disinfection work for the last time

Schematic Diagram of Product:



Operation Instruction:

1. Short press " " to start the machine. If not performing any operation after starting the machine, it will automatically switch off after 30 seconds for the energy conservation and environment protection.
2. Design of Hall Switch. If the screen displays " " , it indicates the disinfection case is closed; If the screen displays " " , it indicates the disinfection case is not closed.
3. Short press " " to switch the disinfection mode: ultraviolet disinfection mode (screen will display " "), ozone disinfection mode (screen will display " ").
4. After selecting the disinfection mode, it is able to adjust the disinfection time by short pressing "+" or "-" button (screen will display the time):
 - Under the ultraviolet disinfection mode, it is able to set up the disinfection time from 1 minute to 60 minutes; Adjust the time by short pressing "+" or "-" button (It is able to accelerate the adjustment by long pressing for 1.5 seconds)
 - Under the ozone disinfection mode, it is able to set up the disinfection time from 30 minute to 240 minutes; Adjust the time by short pressing "+" or "-" button (It is able to accelerate the adjustment by long pressing for 1.5 seconds)
5. After adjusting the disinfection time, it is able to activate the disinfection work by long pressing " " for 1.5 seconds, and " " on the screen will flash. If not long pressing " " , it will automatically switch off after 30 seconds for energy conservation and environment protection.
 - Under the ultraviolet disinfection mode, the white " " will change to purple " "
 - Under the ozone disinfection mode, the white " " will change to blue " "
6. If the disinfection case is open during the disinfection, and the screen will display " " , " " will disappear and the time will return to the preset time.
7. Long press " " during the disinfection to switch off the machine.
8. Short press " " , "+" button and "-" button during the disinfection will not be effective.
9. It will automatically stop the ozone work in the last 10 minutes of preset time in the course of ozone disinfection, and activate the ultraviolet automatically to perform the 10-minute ozonolysis.
10. If " " on the screen disappears and the time displays the green number 0, it indicates the disinfection work is completed.
11. If the battery level is lower than 20% and the battery level displays in red " " , it is required to charge as soon as possible to avoid that the remaining battery power is insufficient to finish one complete disinfection.
12. After the disinfection work is completed, it will automatically switch off after 30 seconds if not performing any operation for the energy conservation and environment protection.
13. The disinfection case has the memory function: After starting the machine each time, the screen will display the mode and time of disinfection work for the last time.

Suggested Time for Disinfection:

1. Time suggestion for ultraviolet disinfection:
 - As for the ordinary small-sized articles, such as mobile phone, watch, pen, key chain etc., it is suggested to disinfect for 2 minute
 - As for the ordinary middle-sized articles, such as mask, milk bottle etc., it is suggested to 3 minutes
 - As for the ordinary large-sized articles, such as laptop etc., it is suggested to disinfect for 4 minutes
 - As for the professional article disinfection, it is suggested to appropriately extend the disinfection time
2. Time suggestion for ozone disinfection:
 - As for the ordinary article disinfection, it is suggested to disinfect for 60 minutes
 - As for the professional article disinfection, it is suggested to appropriately extend the disinfection time

SAFETY WARNING:

1. Please read and understand this user manual before use, to ensure that the product is safely and properly used
2. Our Company shall not be liable for product damage and other injuries caused by improper use or failure to follow this User Manual.
3. Strictly forbid any children 0-12 years old to use this product. Users should carefully select places without children before use and ensure that children do not touch the product.
4. Avoid the risk of electric shock during use.
5. The use of this product in gas, flammable and explosive substances, and heat source environments is prohibited.
6. Don't use wet hands in operating the product. Please keep the operating environment dry
7. Do not remove, repair and alter the product by oneself. Repairs and battery replacements can only be carried out by authorized service providers and manufacturers, and repair and replacement of batteries by authorized service providers and personnel other than manufacturers may result in injury. Replacing the battery with the wrong model is a risk of explosion
8. Use the product only at specified voltages and frequencies
9. UV Light Hazard. Harmful to bare skin and eyes. Can cause temporary or permanent loss of vision. Never look at the bulbs while illuminated. Any exposed skin must not be exposed to UV light

CAUTION:

UVC-Equipment Damage Hazard.

1. Ultraviolet light can cause color shift or structural degradation of plastic materials
2. Ultraviolet light can cause color shift or structural degradation of resin materials
3. Ultraviolet light can cause color shift or structural degradation of leatherwear
4. Ultraviolet light can cause color shift or structural degradation of organic compounds materials

OZONE-Equipment Damage Hazard.

1. OZONE can cause color shift or structural degradation of plastic materials
2. OZONE can cause color shift or structural degradation of resin materials
3. OZONE can cause color shift or structural degradation of leatherwear
4. OZONE can cause color shift or structural degradation of organic compounds materials
5. High concentrations of ozone for a long time can cause electronic products function damage



NOTES:

1. The design of this product based on IEC 62471:2006 Photobiological safety of lamps and lamp systems and other international standards
2. This product utilizes the ultraviolet rays LED , which emits UV-C rays with peak value wave length at 275nm to disinfect
3. Ultraviolet LED is a relatively tight and fragile electronic component, users should avoid the impact on the product resulting in product failure.
4. The design of this product is according to Code of Federal Regulations Title 21, Volume 8 by US FDA, California Code of Regulations Title 17 Public Health, and IEC 62368-[4] 7.3 and other international standards
5. According to code of federal Regulations Title 21, Volume 8, ozone is a toxic gas, according to the FDA. Although ozone has been reported to have adverse physiological effects on the central nervous system, heart and vision, its main physiological effect is to stimulate the mucous membranes. Inhalation of ozone causes enough irritation to the lungs, leading to pulmonary edema. The onset of pulmonary edema is usually delayed by several hours after exposure; As the hazards of ozone are widely understood, people pay full attention to the use of ozone.
6. At Ozone concentrations of 0.02PPM (0.04mg/m³), ozone can be smelled by people with acute olfactory senses, at 0.15PPM (0.32mg/m³), ozone can be smelled by the general population, at 1-10PPM (2.14 - 21.4mg/m³) ozone has reached the "stimulus range", and can be clearly smelled, at 10PPM (21.4mg/m³) ozone has reached the "toxic range" or more "poisonous range". The odor of ozone is not a reliable warning indicator due to the possibility of olfactory fatigue
7. Long term occupied enclosed spaces, such as houses, apartments, hospitals and offices, should have ozone volumes below 0.1mg/m³ (0.05PPM). The ozone concentration in the workplace, i.e. occupational exposure limit, is 0.1PPM
8. The amount of space used by the equipment used to place and use this device should not be less than 20m³ to ensure that the ozone remaining in the equipment has sufficient space to be decomposed to a safe level when the cabinet door is opened
9. When opening the equipment for ozone disinfection, make sure that the equipment is in a well ventilated environment. If the equipment cannot be ensured to be in a well-ventilated environment, only open the cabinet door at least 30 minutes after an ozone disinfection session has finished
10. Ozone is unstable, breaks down rapidly at high temperatures, slowly breaks down to (oxygen) at room temperature, has a half-life of about 16 minutes in 1% of ozone solution and about 25 minutes in the air.
11. Pure ozone, if receives impact or friction, will explode and decompose. High concentrations of ozone when heated is also prone to explosion. But as long as care is taken, such accidents are rather rare. Ozone should not have high concentrations of flammable and explosive gases at the disinfection site when it is used for air disinfection.

12. The user use 3M8514 welding protection mask (or equal grade protection masks) when use ozone to disinfect, and can process ozone protection which at 10 times occupation touch limit potency under 1PPM
13. This product set enough safety device to guarantee the safety of users. The daily item to item check is the necessary condition to guarantee that safety use the equipment. Please process item to item check according to the requirements in the specification, need stop use the equipment immediately once found the problem.
14. Because of the instability of ozone, ultraviolet light accelerates the decomposition of ozone and converts it back to oxygen. After the ozone work is completed, the equipment switches to UV mode to quickly reduce the ozone concentration in the equipment. The user must never open the cabinet doors before the device has completed the ozone disinfection operation (before the end of the timer countdown in the monitor)
15. Users are advised to equip users with ozone concentration detection instruments to regularly detect whether the leaked ozone value of the equipment exceeds the safe value: long term populated enclosed spaces, such as houses, apartments, hospitals and offices, ozone must be less than 0.1PPM in English. If ozone leakage value is found to have exceeded the above standard, the equipment must be immediately stopped.

To guarantee the disinfect effect of UVC:

1. Whether UV light can effective disinfect depends on the amount of exposure received by the disinfection object, which depends on the radiation power of the UV light source, the distance of the disinfection object from the UV light source, and the duration of the exposure to UV light.
2. When killing common microorganisms, the irradiated dose should reach 10,000 $\mu\text{W}/\text{cm}^2$; 100,000 $\mu\text{W}/\text{cm}^2$ is the recommended dose to kill bacterial spores. The radiation dose should not be less than 100,000 $\mu\text{W}/\text{cm}^2$ when the target microorganism for disinfection is unknown.
3. According to the radiation intensity of the UV light source of this product and the general distance of the UV light source from the irradiated object, it is recommended that:
 - In order to achieve the radiation dose of 10,000 $\mu\text{W}/\text{cm}^2$ to meet the general needs of daily use, the exposure time should be at least above 60 seconds
 - In order to achieve the radiation dose of 100,000 $\mu\text{W}/\text{cm}^2$ to meet the needs of the professional environment, the exposure time should be at least above 500 seconds

To guarantee the ozone disinfect effect:

1. Ozone can kill bacterial reproductions, viruses, fungi, etc., and can destroy botulinum toxin. In order for ozone to be effective as a disinfectant, its concentration must be much higher than that that can be safely tolerated by humans and animals. Ozone has a powerful killing effect on microorganisms in the air, and at the same time has the odor-removal characteristics, 30minutes of 20mg/m³ (9.35PPM) concentration of ozone in a sealed environments can achieve disinfection effect. Ozone on the surface of the items of the microorganism also has a killing effect, requiring 60mg/m³ (28.04PPM), relative humidity of 70%, and exposure of 60 minutes to 120 minutes, to achieve disinfection effect.
2. If the equipment is stopped in the middle of the operation, the disinfection effect cannot be guaranteed, a new disinfection session from the start will be necessary.

The reminding of damage about the disinfect objects:

1. The effects of ozone on a variety of substances vary considerably. Glass, stainless steel, butyl rubber, silicone, polycarbonate, and ABS plastics are better at ozone resistance, but nylon, zinc, glass-fibre-added plastics, and natural materials such as natural rubber and leather, are less resistant to ozone.
2. In order to ensure the service life, this product is designed with ozone-resistant materials.
3. In order to examine the accelerated aging effect of ozone on substances, the substance was tested for 60 minutes at a time using ozone concentrations of 35PPM.
4. After 10 tests of six different leather material colors samples, the results show color fading and hardening of the material, especially the brighter samples, whose fading was more pronounced
5. The same conditions were tested on stainless steel, aluminum, gold-plated PIN needles, silicone, cotton pads, cotton and ABS plastics, and no significant decomposition was found
6. It is recommended to avoid ozone disinfection of brightly colored leather, silk and other items. Some highly aged items, such as natural rubber, are also recommended to not undergo ozone disinfection. Since ozone has an oxidative effect on most metals, users should not use ozone disinfection on electronic products to avoid ozone damage to devices containing metal substances, such as circuit boards in electronic products.

Equipment maintenance, please contact professional after-sales service stores or professionals



WARNING HARMFUL OZONE may be created by this product.
Follow installation and operating instructions.



WARNING UV-C emitted from this product.
Avoid eye and skin exposure to unshielded product.
Follow installation instructions and user manual.



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