



> Advantages

- Specially-crafted quartz lenses are used to provide high UV transmittance (>93%), transmitting UV rays with a wavelength of.
- Patented phase-change heatsink to ensure long operating hours. Rated at 80,000 hours, with no more than 25% light decay.
- Uses ultraviolet light photocatalysis with titanium dioxide as a catalyst to generate hydroxyl radicals to kill viruses.
- Emits UV rays that can kill viruses, bacteria and other microorganisms within 1 second, compared to the traditional sterilization methods such as chlorine and ozone which need 30-60 minutes to achieve the same effect.
- Eco Friendly: Sterilization is achieved without the use of chemical agents that could otherwise cause pollution.

> Working Principle

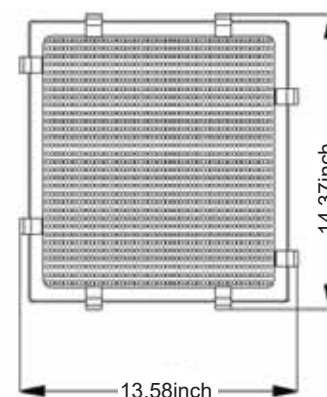
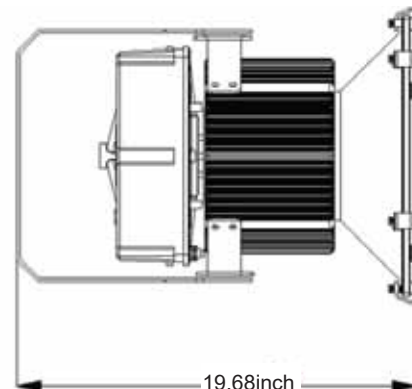
Ultraviolet light is used to catalyze titanium dioxide to generate hydroxyl radicals to kill viruses. The hydroxyl radicals ($\cdot\text{OH}$) have a very high oxidation potential (2.80eV). It can react quickly with most organic pollutants, and non-selectively oxidize harmful substances into CO_2 , H_2O or mineral salts without the need for chemical disinfectants that could cause secondary pollution.

> Usage Range

This product can be used in any setting where sterilization and disinfection are necessary, such as hospitals, schools, air conditioning systems, disinfection cabinets, water treatment facilities, water dispensers, sewage treatment plants, swimming pools, food and beverage production, etc.

> Specifications

Product Name		UVC High Power UV LED Germicidal Lamp	
Rated Electrical Power		60W	300W
Rated UV Power		0.48W	4W
Effective UV Wavelength		260-285 nm	
Model		AntiV-i2-60W	AntiV-i2-300W
Structural Parameters	Input Voltage (V)	100~240V AC	
	Material and Technology	Aluminum body, UV LED, Quartz Lens, Titanium Dioxide Catalytic Mesh	
	Overall Dimensions(mm)	365*345*410	365*345*500
	Shape	Square	
Rated Lifetime		8,000 hours	



> Instructions

Disinfecting Surfaces

Irradiation mode: Different microorganisms have their own sensitivity to UV rays, so different methods may be needed depending on the surface in question. Short-distance mobile irradiation with the UV LED germicidal lamp is the best method. For a longer term solution, suspend the lamp above the desired area. Small items can be irradiated in a UV disinfection box.

Disinfecting Air

The 60W UV LED germicidal lamp not only has a reliable disinfection effect, but also can be safely used in occupied rooms. Generally, disinfection can be achieved after 30 minutes of indirect irradiation.

In unoccupied rooms, the higher wattage models (150W/300W) can be suspended or moved around to directly irradiate with higher intensity for quicker disinfection.

Disinfecting Water and Other Liquids

The UV germicidal lamp can be used to disinfect liquids from above. If more direct irradiation is needed, it can be placed into shallow liquids up to the protective quartz glass. No matter which method is adopted, the liquid should be less than 2cm deep for optimal sterilization.

Table 1 Killing results of E. coli by deep ultraviolet LED

LED Model	Irradiation distance (cm)	Irradiation time (s)	Number of colonies				Sterilization rate (%)
			Experiment 1	Experiment 2	Experiment 3	Average	
Dan 1	1	5	107	50	160	106	68.9
Dan 1	1	10	38	60	95	64	81.1
Dan 1	1	20	6	2	42	17	95.1
Dan 1	1	40	0	0	7	2	99.3
Dan 1	2	5	154	167	154	158	53.4
Dan 1	2	10	58	56	88	67	80.2
Dan 1	2	20	27	32	78	46	86.6
Dan 1	2	60	0	0	0	0	100.0
Dan 2	1	5	14	23	14	17	95.0
Dan 2	1	10	5	6	3	5	98.6
Dan 2	1	20	12	5	5	7	97.8
Dan 2	2	5	16	4	5	8	97.5
Dan 2	2	10	4	4	4	4	98.8
Dan 2	2	20	0	10	5	5	98.5
Mo 1	1	1	112	103	72	96	71.9
Mo 1	1	3	7	5	6	6	98.2
Mo 1	1	5	0	0	0	0	100.0
Mo 1	2	3	2	0	1	1	99.7
Mo 1	2	5	0	0	0	0	100.0
Contrast	-	-	361	324	335	340	-

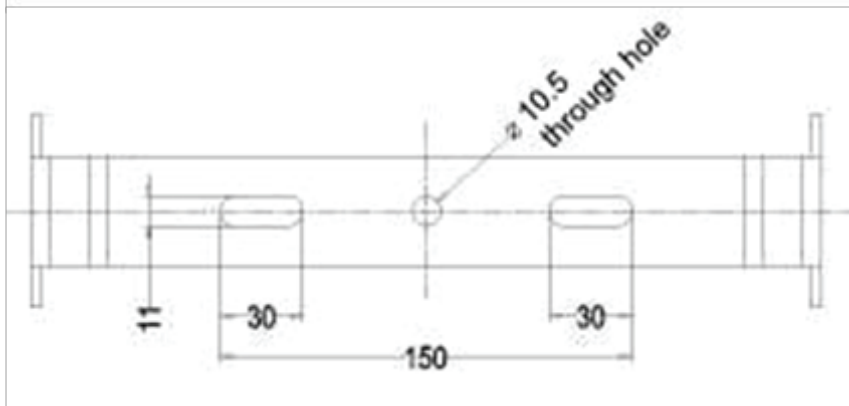
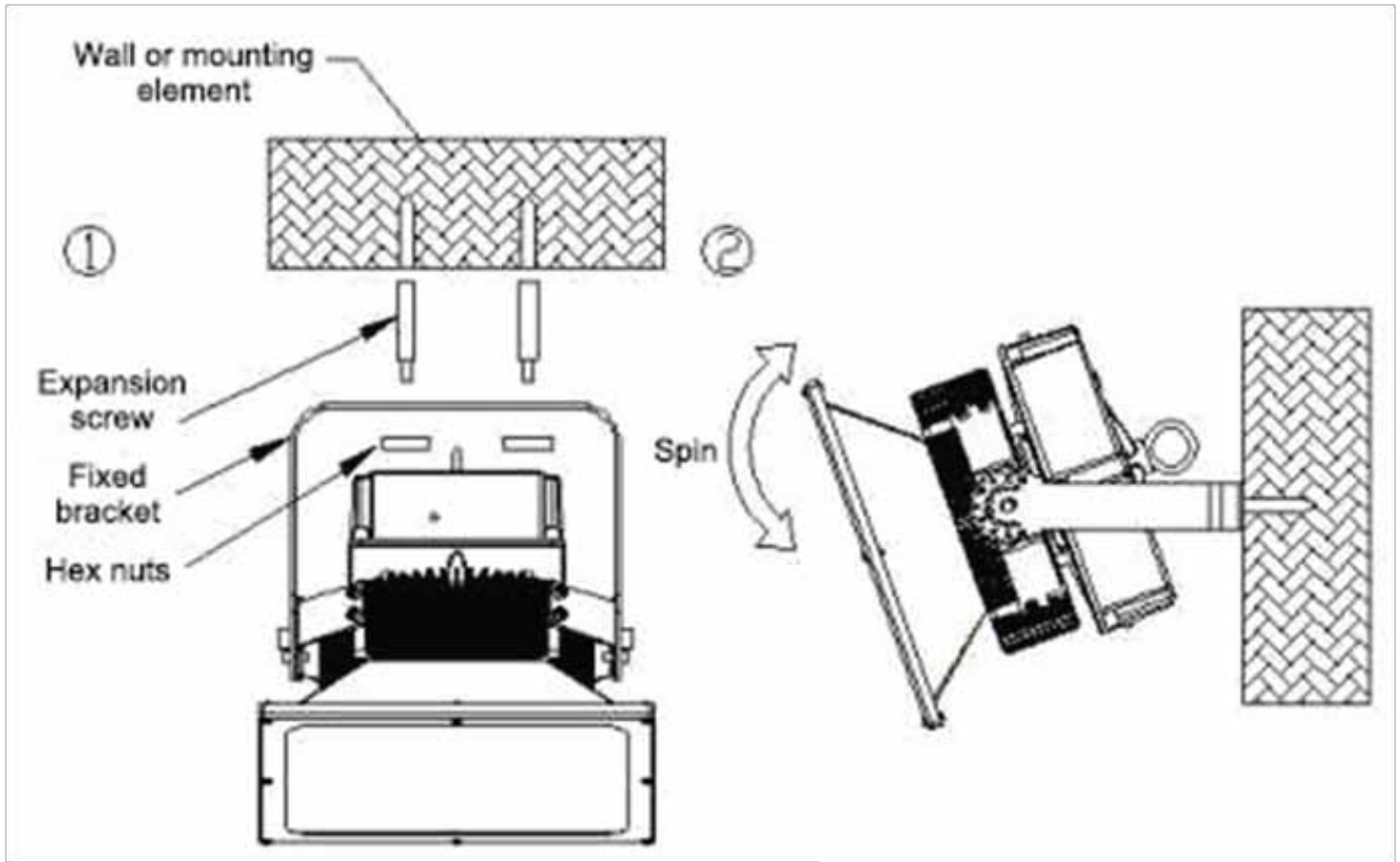
Table 1 Killing results of Aspergillus flavus by deep ultraviolet LED

LED Model	Irradiation distance (cm)	Irradiation time (s)	Number of colonies				Sterilization rate (%)
			Experiment 1	Experiment 2	Experiment 3	Average	
Mo 1	1	100	0	0	0	0.0	100.0
Mo 1	1	150	0	0	1	0.3	99.6
Mo 1	1	200	1	0	0	0.3	99.6
Mo 2	1	50	1	5	6	4.0	94.8
Mo 2	1	75	2	3	0	1.7	97.8
Mo 2	1	100	1	0	4	1.7	97.8
Contrast	-	-	75	82	72	76.3	-

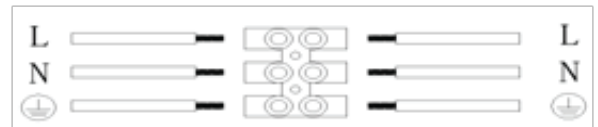
> Installation Instructions

Do not connect the UV LED germicidal lamp to the high-voltage power supply before installation. Only connect it strictly according to the product's nominal working electrical parameters

1. When the lamp is installed, the mounting structure supporting the lamp must be able to bear at least four times the weight of the lamp. See diagram 1. Install expansion bolts and hanging plates. When installing the lamps, the external power cord wiring and connection points are sealed to prevent leakage; corresponding waterproof and water leakage measures must be taken. This lamp cannot be used in violation of any fire protection regulations. Please find a professional electrician for the installation of a three-core cable of 0.75-1mm. See diagram 2. Adjust the lamp to a suitable angle, and then tighten the screws on both sides.



Mounting bracket hole size chart



Wiring diagram

Installation Precautions

1. Please turn off the power before installation. The power supply voltage must not exceed the rated operating voltage of the lamp.
2. If the external power line and signal line of the lamp are damaged, the power must be cut off and repaired or replaced by a qualified engineering technician.
3. The power supply and the chips must be replaced by professional electricians or engineers.
4. Do not use sudden or violent means for assembly and installation.
5. Be mindful of fire, electricity, and shock risks.
7. Ensure that the hoisting rope has sufficient load-bearing capacity during installation; please ask before installation or maintenance.

Matters of Attention

Ultraviolet rays have a strong lethality to bacteria, but can also cause a certain degree of harm to the human body. The most vulnerable part of the human body is the cornea of the eyes. To avoid injury, do not look directly at the lighted lamps at any time. If it is necessary, use ordinary glass (ex. wearing glasses) or a transparent plastic sheet as a protective mask. Do not use quartz glass. Exposure can lead to red, puffy, irritated eyes; if treated properly, recovery may take 3-4 days. If injured, it is recommended to immediately consult with a doctor or physician.

1. During use, the surface of the ultraviolet lamp should be kept clean. Wipe with alcohol gauze at least once a week. Be sure to wipe before use if you find that the surface of the lamp is dusty or oily.
2. When sterilizing a surface or item with UV rays, the irradiated surface should be directly irradiated with ultraviolet rays to ensure a sufficient irradiation dose.
3. Calibrate the UV intensity meter at least once a year. With proper maintenance, the UV lamp's operational life should exceed 8,000 hours of usage.
4. After disinfecting the room with the UV lamp, ventilate the room as soon as possible.

