

UVC-LED Integrated Dynamic Sterilization Module

Highlights & Features

- Powered by a DC36 V constant voltage source, current-limited module
- Constant current power supply ensures stable light source output
- Compact product size and compact design
- Wavelength 275 nm, suitable for the UVC sterilization band
- UVC radiant flux ≥ 110 mW
- Sterilization rate greater than 99.99%
- All materials comply with RoHS requirements
- Simple structure, easy to use, effective service life 10,000 h
- With working feedback signal output
- All water-contact parts comply with food safety and water approval standards
- The tube is made of PTFE UV-resistant food-contact grade material



SELV



Product Description

This is a high-power UVC-LED flow-through disinfection module. It features imported high-power UVC-LED chips, emitting deep ultraviolet light in the 270–280 nm range for efficient physical sterilization. The module body is made of PTFE UV-resistant food-contact grade material, offering excellent chemical corrosion resistance and high-temperature resistance. It is safe and reliable and can be directly used in drinking water treatment scenarios. The product has an IP67 high protection rating and additionally meets air-tightness test standards. It is suitable for water-contact equipment with strict sealing requirements, such as water purifiers, water dispensers, and water heaters, and can operate stably within a temperature range of -30°C to 55°C. It is safe for water contact, mercury-free, and easy to dispose of.

Application Fields

- This module is suitable for drinking water treatment scenarios.
- This product is widely used in water dispensers, ice makers, air humidifiers, air purifiers, aroma diffusers, pet water fountains, dishwashers, and other products.

Applicable Standards

- GB/T 4827-2015

Performance Parameters

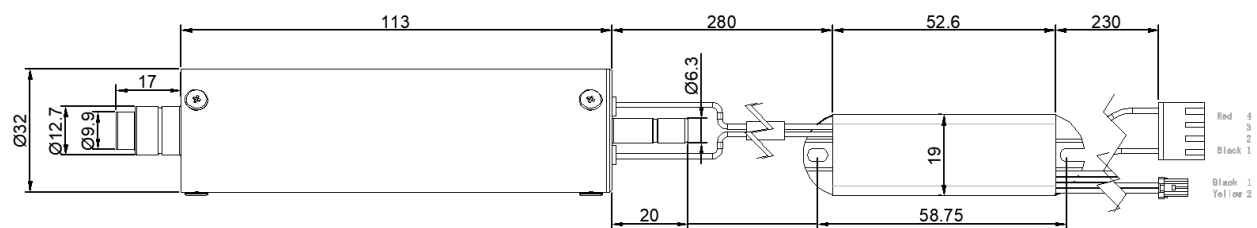
Item	Specifications	Remarks
Model	110300000010	-
Product Dimensions	Φ32*17mm	-
Net Weight	219.2 g	Manually measured, for reference only
Rated Voltage	DC36 V	Customizable
Sterilization Rate	>99.99%	-
UVC Wavelength	270–280 nm	Peak wavelength (λ _p) measurement tolerance: ±3 nm
LED Lifespan	10,000H	Depending on LED selection
Cable Length	230mm	Cable length customizable
Terminal	VHR-4H,white	Terminal customizable
Dielectric Withstand Voltage	DC500V/1min@10uA,leakage Current	-
Waterproof Rating	IP67	-
Operating Water Pressure	≤0.6MPa	-
Operating Temperature	-30℃ to 55℃	-
Storage Temperature	-40℃ to 85℃	-
UVC Radiant Flux	≥110 mW	-
Input Current	110±10% mA	Depending on LED selection
Input Power	3.8±10% W	Depending on LED selection
Beam Angle	120℃	-
Sealing Performance	Passed 1 kg water pressure test; no fogging after 30 s of power-on	-
Main Body Material	PTFE	-
UVC LED Brand	LITE ON	-
Water-Contact Parts	304 stainless steel / PTFE tube / quartz glass	Complies with international water-contact standards

Test Method

- UV Power Test: Using an integrating sphere, the module's UV power output is greater than 110 mW.
- UV Wavelength Range Test: Using an integrating sphere, the wavelength range is 270 – 280 nm.
- Sealing Performance Test: Under a water pressure of 1 kg with a booster pump, the unit is powered on for 30 s with no fogging. In addition, after maintaining an inlet water pressure of 0.03 MPa for 15 min, no water shall be visually observed inside the LED glass cover; and after being kept at a water depth of 1.5 m for 24 h, no water shall enter the UV assembly.
- High/Low Temperature Test: The product can operate reliably within a temperature range of -30 to 55° C and can be stored reliably within a temperature range of -40 to 85° C.
- Air-tightness Test: Maintain at 0.1 MPa for 20 s, with leakage < 20 Pa and a pass rate > 99%.

Product Dimensions

- Module dimensions: $\Phi 32 \times 17$ mm (diameter $\times$ height)
- Tolerance ± 0.5 mm



Unit: mm

Safety Precautions

- This product emits deep ultraviolet (UVC) when powered on, which is harmful to human skin and eyes. When the LED is operating normally, avoid exposure to deep ultraviolet. Preventive measures must be taken, using appropriate protective equipment such as goggles and clothing to protect the body. Avoid directly observing ultraviolet without UV-protective glasses. When the LED is operating normally, do not look directly at the front of the LED or at an angle to the LED.
- Never look directly at the deep ultraviolet emitted by this product with the naked eye at any time.