

UVC-LED Static Water Sterilization Module

Highlights & Features

- Powered by a DC24–36 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 ≥ 12 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



SELV 

Product Description

This is a compact UVC-LED static water sterilization module. It uses imported UVC LED chips with a wavelength between 270 and 280 nm, delivering high sterilization efficiency. It is mainly used for bacterial inhibition in air and liquids. The module body is made of PP5250T material, which is safe and reliable and can be directly used in drinking water-related equipment. The product is compact and flexibly designed. The light source module part has an IP67 high protection rating, effectively purifying drinking water contaminated by a smart seat that has not been cleaned in time. It is suitable for end-point sterilization and disinfection scenarios in small water circuits such as water purifiers, water dispensers, ice makers, and humidifiers, and can operate stably and durably 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 a static UVC LED antibacterial module suitable for bacterial inhibition in air and liquids.
- 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

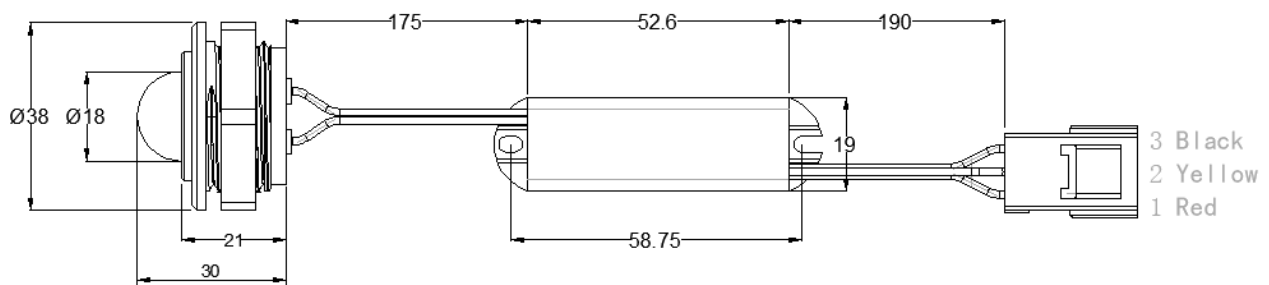
Item	Specifications	Remarks
Model	1103000000003	-
Product Dimensions	Φ38*30mm	-
Net Weight	39.2 g	Manually measured, for reference only
Rated Voltage	DC24 V	Customizable
Sterilization Rate	>99.99%	-
UVC Wavelength	270–280 nm	Peak wavelength (λ _p) measurement tolerance: ±3 nm
LED Lifespan	10,000H	Depending on LED selection
Cable Length	190mm	Cable length customizable
Terminal	YLNR-03VF,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	≥12 mW	-
Input Current	36±10% mA	Depending on LED selection
Input Power	0.8±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	PP5250T	-
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 12 mW.
- UV Wavelength Range Test: Using an integrating sphere, the wavelength range is 270–280 nm.
- Sealing Performance Test: Under a water pressure of 1kg with a booster pump, the unit is powered on for 30 seconds with no fogging.
- 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.

Product Dimensions

- Module dimensions: $\Phi 38 \times 30$ 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.