SWDC SERIES

SWDC-T306-DNN-U1930

Ultraviolet (UV) sterilization technology destroys micro-organisms with instantaneous high-power ultraviolet ray emissions, featuring high efficiency sterilization, no resurrecting micro-organisms and no side effects.

Specifications are subject to change without notice.

SWDC-T306

The SWDC-T306-DNN-U1930 uses a deep ultraviolet LED as the UV-C light source combine with a storage type water tank to sterilize the water stored in the tank. The irradiance of ultraviolet LED can reach over 0.8 mW/cm^2. For any 5L water tank, measured sterilization rate in the water tank can reach over 99% after 40 ~ 50 mins irradiation.

- **Product Features:**
  1. Sterilization efficiency over 99%①
  2. Working life of 7,000 hours or more
  3. Working voltage 24V typical value (If you need other voltage drive, please contact us)
  4. Low standby operating current ：< 0.1 uA
  5. Lead-free environmentally friendly RoHS compatible
  6. Waterproof level up to IP68②

① In the laboratory working environment, using the standard E. coli method to count the difference before and after sterilization;

② Please refer to the test standard of IEC60529/GB4208

Product Specification:

1. Module Spec:

Spec		Symbol	SWDC-T306-DNN-U1930
Wavelength		nm	265-285
Radiance	Min	mW	5.0
	Typ.		6.0
Voltage		V	24
Power Consumption③	Min.	W	0.3
	Max		0.5
Housing Type			Pitch 2.5/ 3Pin
Signal Detection			LED open circuit
Life Cycle		hrs	7,000④
Weight		g	26±10%

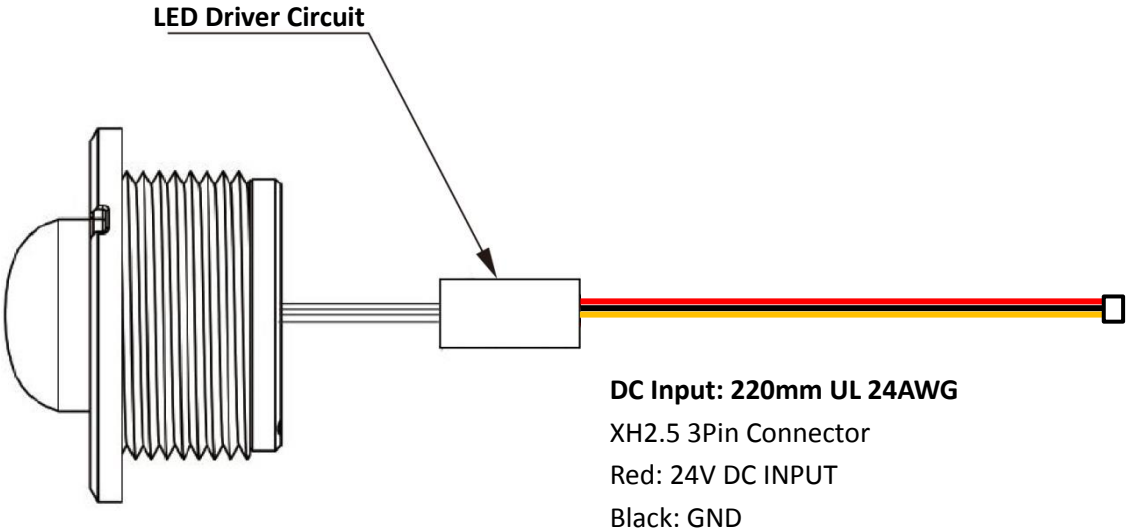


Fig. 1 Wire Schematic

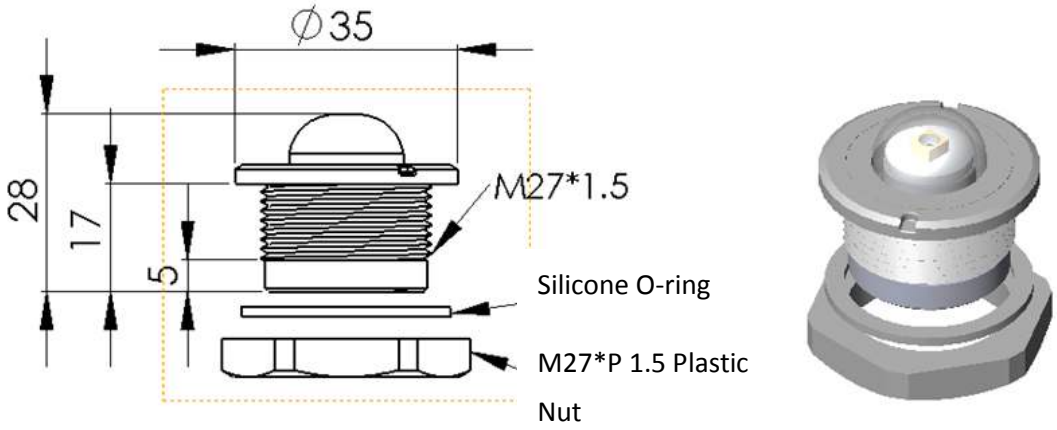


Fig. 2 Module Dimensions

③ Power Capacity above 5W

④ IESNA (Illuminating Engineering Society of North America) LM80 experimental method, 70% Lumens depreciation evaluation standard

Recommended installation Method

Our sterilization module should be placed against the water tank wall, with the UV-C LED located in the center of the upper water tank, allowing the UVC light to diverge along the cross section of the water tank. The LED beam divergence of 125°, will allow the light to reach the top and bottom of the water tank with a conical area of 35mm (10 mm axial distance) of its irradiance. This will meet the National Standard regulation requirement of 30mJ/cm^2, in about 10 minutes.
The penetration depth of 265-285nm ultraviolet radiation is about 100mm in water.

The LED module is controlled by an external circuit. This solution is specially designed for high-power UV LEDs. This can ensure the long-term stable operation of the LED, and will not affect the lifetime of the LED due to overheating.

The main body consists of three parts:

1. Quartz glass waterproof and dust proof casing
2. UV-C LED mounted on aluminum substrate
3. Base platform. The UV-C LED on aluminum substrate is encapsulated in a quartz glass sealed to isolate water and other pollution, and the base is used to fix the integral module on the upper cover of the water tank.

Note: If there is air between the UVC LED module and the water, the sterilization efficiency will be reduced.

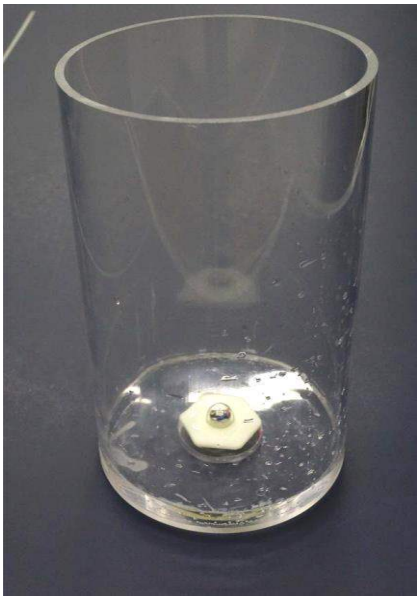
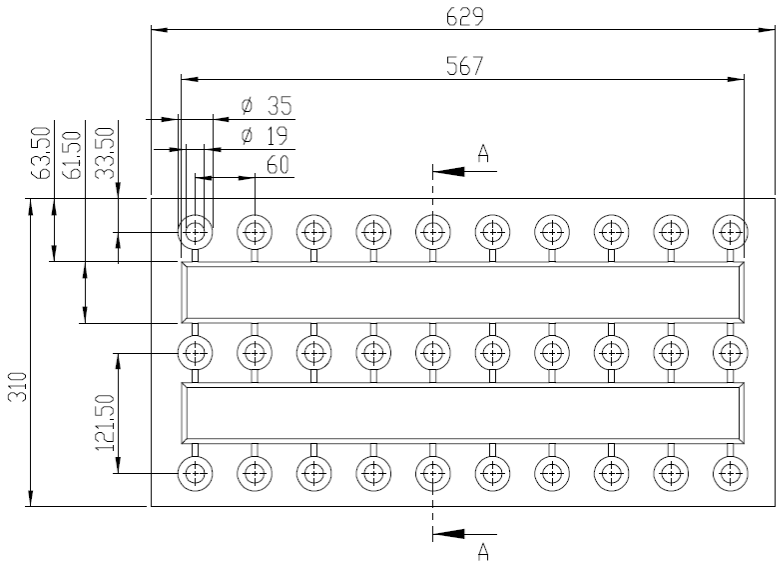
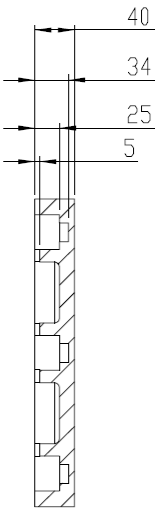


Fig. 3 4L cylindrical water tank installation diagram

- **Packaging:**

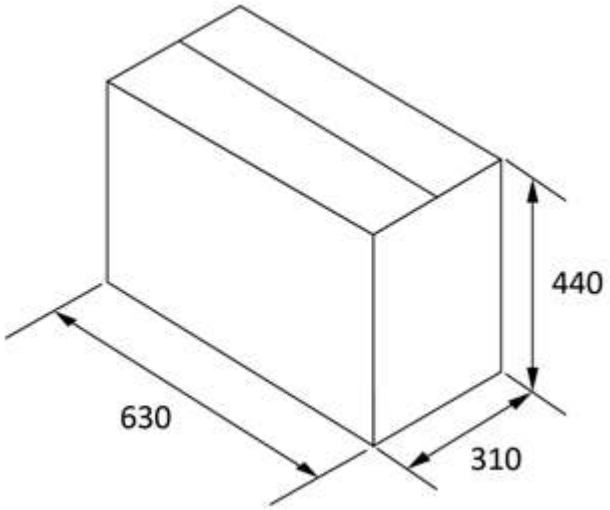
1. Protective Foam Dimension: 629 x310 x40 mm
   Quantity: 30 pieces/ layer





Section A -A

2. Outer Carton Box Dimension: 630 x310 x440 mm
   Quantity: 10 layers/ box



*Unit: mm

*Tolerance: +/- 10mm

- **History of Version:**

Revision	Date	Contents of Revision Change	Remark
Rev 1.0	Apr 27, 2020	New Establishment	