UVC LED sterilization module
YG-F228

PRELIMINARY SPECIFICATIONS

Elphoton
INNOVATE HUMAN LIFE

CONTENTS

1. Description

The Elphoton UVC LED water sterilization module.

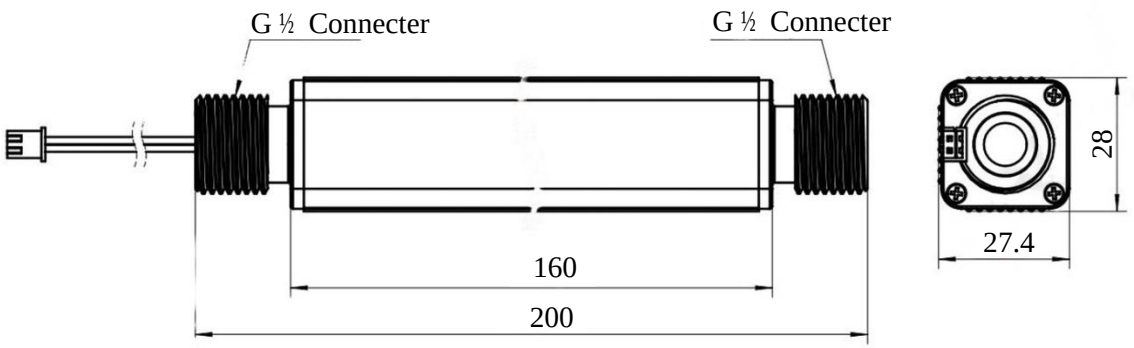
◆Features

- Advanced UVC LED sterilization technology
- Low water resistance, Metal casing, Replaceable connectors, Easy to install
- Small volume, Large flow, Long effective life
- All materials comply with RoHS environmental requirements
- All waterproof comply with food safety standards

◆Application

- Water sterilization

2. Outline Dimensions



Suitable for 1/4”

3. Electrical Optical Characteristics

Parameter	Conditions	Min.	Typ.	Max	Unit
Forward voltage	V_F=12V	11	12	13	V_{dc}
	V_F=24V	23	24	25	V_{dc}
Power consumption	V_F=12V/24V	16	-	20	W

Note

* Tolerances are followings as below.

- Forward Voltage: DC 12/24V
  - Forward Voltage Tolerance : ± 3%

4. Performance

Parameter	Result
Life time	>3,000 hr
Sterilization	E.Coli 99.99%
Flow Rate	15L/min
Waterproof Grade	IP54
Working Water Pressure	≤0.6MPa
Insulation Withstand Voltage	DC500V/min
Net Weight	260g

5. Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Operating Temperature	T_{opr}	0 ~ +45℃	℃
Storage Temperature	T_{stg}	-40 ~ +85℃	℃
Storage humidity		40~65%	%

6. Parts

Parameter	Standard Specification	Remark
Joint size	1/2” Connecter	Customized
Wire Length	500±10mm	

7. Precaution

1) Safety for eyes and skin

- The Products emit high intensity ultraviolet light which can make your eyes and skin harmful, so do not look directly into the UV light and wear protective.

- Do not open arbitrarily.

- Do not look directly at the joint when operating

2) Handling Precautions

- VOCs(Volatile Organic Compounds) can be generated from adhesives glue, cleaning flux, molding hardener or organic additive which used in luminaires fixtures and they(VOCs) may cause a significant Radiant Flux & Irradiance degradation of LED in Products when they exposed to heat or light. To prevent this phenomenon, materials used in Products must be carefully selected by users.
- The metal parts on the module can rust when exposed to corrosive gases. Therefore, exposure to corrosive gases must be avoided during operation and storage.
- The metal parts also can be affected not only by the corrosive gases emitted inside of the end-products but by the gases penetrated from outside environment.
- Extreme environments such as sudden ambient temperature changes or high humidity that can cause condensation must be avoided.
- The UV Module is encapsulated with special material for the highest flux efficiency. So it needs to be handled carefully as below

- Avoid touching quartz or glass parts especially with sharp tools such as Tweezers

- Avoid leaving fingerprints cover parts.

- UV Module will attract dust so use covered containers for storage.

- Do not touch the products with wet hand

- Avoid giving strong impact on the products.

7. Precaution

3) Others

- Elphoton is not responsible for any damages or accidents caused if the operating or storage conditions exceed the absolute maximum ratings recommended in this document.

- When connecting the module in the power on state, LED can be damaged by the influence of the inrush voltage / current.

- If the reverse voltage is applied to UV Module, migration can be generated resulting in LED damage.
- Please handle using equipment that prevents static electricity.
- Avoid touch unless ESD protection is used.

- The LEDs described in this document are intended to be operated by ordinary electronic equipment.
- Consult Elphoton, sales staff in advance for information on the applications in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LEDs, may directly jeopardize life or health.
- It is recommended to consult with Elphoton, when the environment or the LED operation is non- standard in order to avoid any possible malfunctions or damage to product or risk of life or health.
- Disassembly of the LED products for the purpose of reverse engineering is prohibited without prior written consent from El photon.
- All defected LEDs must be reported to El photon and are not to be disassembled or analyzed.
- The Specifications can be modified and upgraded without prior notice.

8. Revision Sheet

Revision	Date	Page	Description	Remark
Rev.0.0	24.11.01	-	Preliminary edition	