

# AQUUV™ PoU

## Flowing water disinfection unit

SPECIFICATION      P/N : APHN-Q1

### DESCRIPTION

---

- ◆ AQUUV PoU is disinfection unit with UVC LED
- ◆ This unit is designed for PoU applications

### FEATURES

---

- ◆ Eco friendly product : No mercury, no chemical
- ◆ UVGI : UVC LED
- ◆ Cost-effective and Low Power consumption
- ◆ High disinfection rate : more than 99.99% (E. coli at 2.0LPM)
- ◆ Waterproof and Compact design
- ◆ Using Food-graded materials
- ◆ Easy installation : 1/4" one-touch fitting connection

### APPLICATIONS

---

- ◆ Disinfection / Sterilization
- ◆ Water purifier / Dispenser



---

## Quantum Matrix Inc.

2F 212, Business Incubator Center, 237, Sangidaehak-ro, Siheung-si, Gyeonggi-do, 15073,  
Republic of Korea. TEL: +82-31-497-8861, FAX: 0504-287-2616, e-mail: [swlee.qm@gmail.com](mailto:swlee.qm@gmail.com)

## CONTENTS

---

- 1.Product brief
- 2.Recommended Operating Conditions
- 3.Absolute Maximum Ratings
- 4.Electrical Characteristics
- 5.Dimensions
- 6.Wiring Diagram and Specification
- 7.Handling and Operation Precautions

## Recommended Operating Conditions

Parameter	Unit	Min.	Typ.	Max.	Note
UV transmittance of water	%/cm	95	97	-	UVC range
Water flow rate <sup>1</sup>	L/min	0.3	1.5	2.0	
Max. working pressure	psi	-	-	100	
Water temperature	°C	Above freezing	20	40	
Ambient temperature	°C	-	-	50	
Relative humidity	%	-	-	75	
Continuous operation time	min	-	No limit	-	with water running

### Notes

1. Water flow rate is a range that the unit can cover more than 99.9% of reduction rate of E. coli ATCC 25922 tested by third party.

## Absolute Maximum Ratings

Name	Unit	Rating
Input voltage	V	30
Reverse input voltage	V	0.3
Water temperature	°C	50
Electrostatic discharge	kV	2.0(HBM)

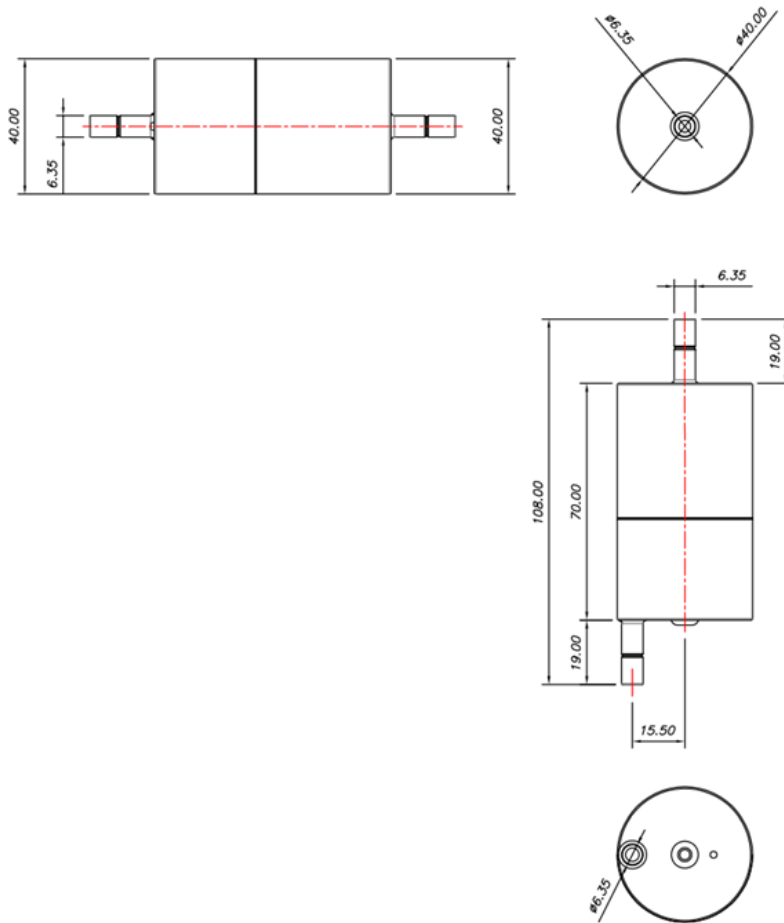
## Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max.	Note
Input voltage	V	18	24	30	DC24V
Power consumption(operation)	W	1.8	2.4	3.0	DC24V

## Dimensions

### Notes

1. Unit : mm
2. Tolerance :  $\pm 0.5\text{mm}$



## Wiring Diagram and Specifications

Red : +  
Black : -



Wire length : 30cm

Connector  
(JST P/N : JST PHR-2 Female)

## Handling and Operation Precautions

The AQUUV PoU contains microelectronic components sensitive to shock, moisture, and operation in conditions beyond stated maximums. Care should be taken in handling the AQUUV PoU during shipping, handling, installation, and operation.

The AQUUV PoU is ESD (electrostatic discharge) sensitive; static electricity and surge voltages seriously damage internal components and can result in product failure.

The AQUUV PoU is ESD (electrostatic discharge) sensitive; static electricity and surge voltages seriously damage internal components and can result in product failure.

- ✓ Ensure that tools, jigs and machines being used are properly grounded and do not exert excessive force upon the AQUUV PoU.
- ✓ Use proper ESD protection, including grounded wrist straps, ESD footwear and clothes when handling the AQUUV PoU.
- ✓ Dropping the product may cause permanent damage.
- ✓ Pre-filtration should be used before the AQUUV PoU that can assure inlet water is of sufficient quality to meet required specifications.
- ✓ Operating without pre-filtration may lead to a reduction of disinfection performance or damage to the AQUUV PoU.
- ✓ The AQUUV PoU should be filled with water during LED ON operation. Operating the AQUUV PoU dry for extended periods may cause permanent damage.
- ✓ The AQUUV PoU should not be modified or disassembled in any way. Doing so may result in damage, hazardous operation conditions, and Ultraviolet (UV) light exposure hazards.
- ✓ Ensure circuit power is off before connecting AQUUV PoU.

