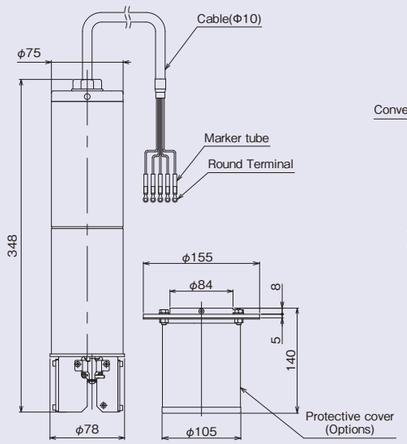
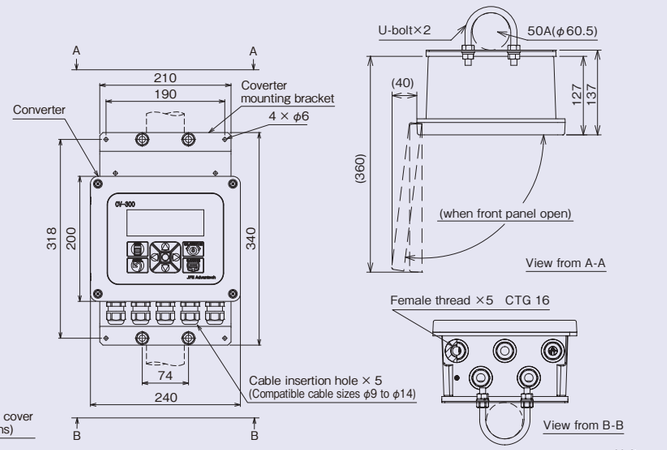
External Dimensions

UV-10 Detector



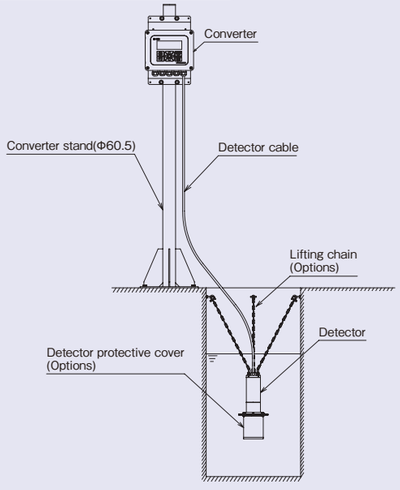
CV-300 Converter



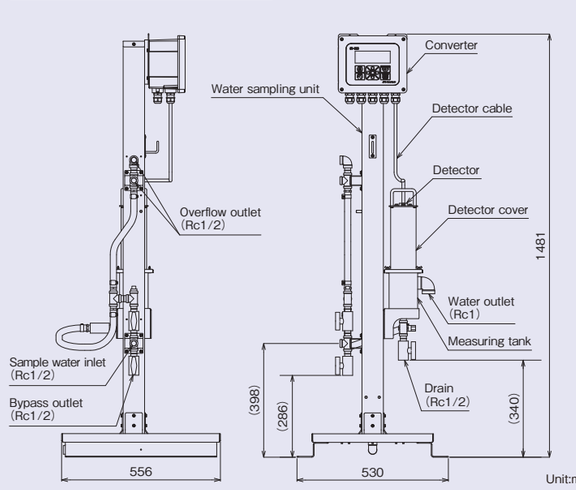
Unit:mm

Installation example

In use with submersion unit



In use with water sampling unit



Unit:mm

*Specifications in this catalog are subject to change without prior notice due to product improvement.

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EC-UV10-03A

23.12.0000①

New Product

UV Meter (Organic contamination monitor)

ISO9001
JQA-0950

UV-10

UV LED Type

■ LED detector
Equipped with UV LED and VIS LED.

■ Reduced environmental and maintenance burdens
Using LED instead of mercury reduces environmental burdens.

■ Applications
Measurements of organic contamination in sewage treatment plant water, factory waste water, rivers, marshes, dams, and other water areas.

■ System
Available for both water sampling method and submersion method.

JFE Advantech Co., Ltd.

Features

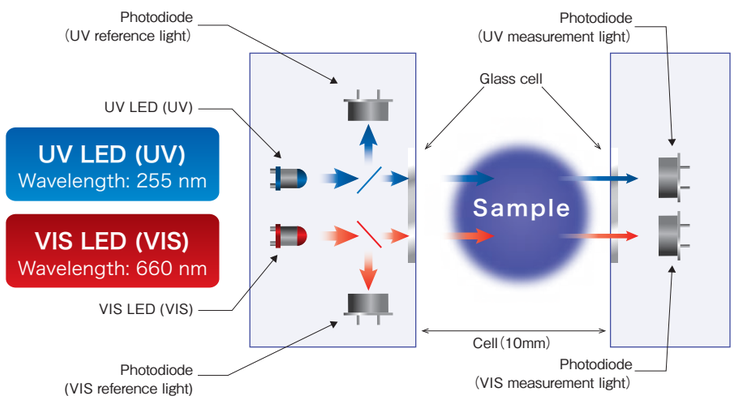
- **UV LED allows it to have longer service life compared to conventional mercury lamp.**

	Mercury lamp	UV LED
Light source life[1]	1 year	20 years or more[2]

* 1: Comparison with our products 2: Design value (varies depending on usage environments)

- **Using LED reduces maintenance burdens and running cost.**
- **Periodically conducts wiper cleaning and zero point calibration automatically those ensure obtaining stable measurement result.**
- **Available for both water sampling method and submersion method with maximum depth rating of 1MPa (100m depth) equivalent.**
- **Measurement data can be saved in the converter and retrieved in CSV format using a USB memory.**

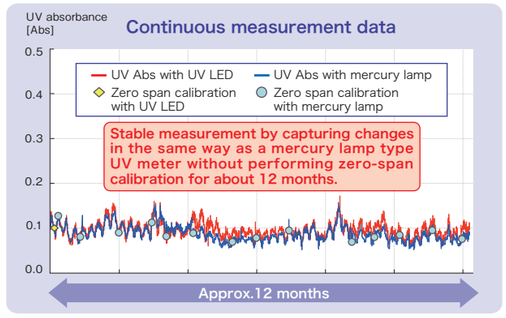
Principle

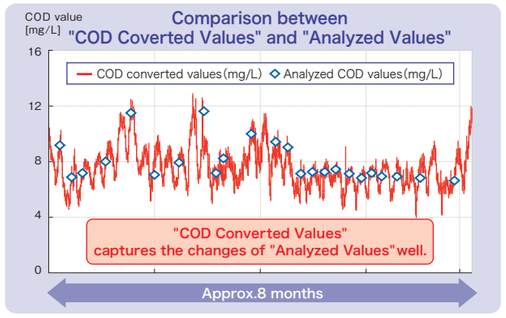


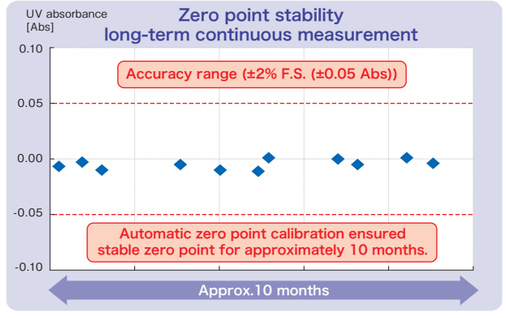
The device continuously measures organic contaminants in the sampled water using absorptiometry. As optical structure, two optical paths in two wavelengths (UV LED and VIS LED) are used. Emitted LED light to be split into reference light and measurement light by the separator. The measurement light that passes through a sample and the separated reference light to be measured by designated photodiodes for each. This system structure significantly improved the temperature characteristic of UV absorbance.

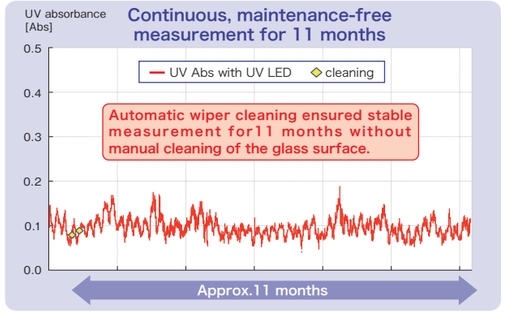
Examples

Installation site: Sewage treatment plant









* UV absorbance does not output negative values. Negative values are indicated only for the purpose of comparison of the UV absorbance measuring performance.

Specifications

UV-10 Detector

Method	Absorptiometry
Light source	LEDs
Measurement wavelengths	UV: 255 nm, VIS: 660 nm
Measurement items	Absorbance (UV, VIS, UV-VIS), COD conversion values, turbidity conversion values, and water temperature
Measurement range	Absorbance: 0.0 to 2.5 Abs
Accuracy (linearity)	±2%F.S. (±0.05Abs)
Reproducibility	±2%F.S. (±0.05Abs)
Physical quantity (COD) conversion function	Correction using linear equation
Automatic zero point calibration	Equipped
Cleaning system	Automatic cleaning by a wiper
Sample water temperature range	0 to 40℃ (freezing not allowed)
Water pressure limit	1 MPa (100 m depth equivalent)
External dimensions	φ78×348mm (excluding protrusions)
Casing material	SUS316
Cable	Material : PVC Length :10m standard (Up to 100m)
Weight	Approx. 3.7 kg (excluding cables)
Options (sold separately)	The following options are available separately. please contact us for any details. ・Water immersion detection function ・Detector protective cover ・Lifting chain

CV-300 Converter

Mounting method[1]	Mount to a pole, on a wall, or to a stand for water sampling unit stand (option)			
Material	Casing	Aluminum die cast(ADC12)	Panel	Aluminum die cast (ADC12)
Color	Casing	Munsell N4 equivalent	Panel	Munsell 5PB6/8 equivalent
External dimensions	240W×200H×127Dmm (excluding protrusions)			
Weight	Approx. 3.1 kg (converter main unit only)			
Power supply	90 to 264 VAC, 50/60 Hz			
Power consumption[2]	Approx. 7.5 W			
Analog output	DC 4 to 20 mA (3 channels : -Io1, -Io2 and -Io3 are common potential.) UV absorbance, VIS absorbance, UV-VIS absorbance, COD conversion values, turbidity conversion values, water temperature (to be selected from one of these)			
Allowable load resistance	800Ω			
Contact input	Photocoupler insulation input (built-in power supply: 24 VDC, 5 mA)			
Self-diagnosis function[3]	Alarm signal output : Out of measured range , Water temperature error , No water immesion[4] , etc Failure signal output : Detector/converter intercommunication error , Sensor error , Converter memory error, etc			
Alarm signal output	a-contact (2 points , contact rating : 240 VAC,1A)			
Failure signal output	c-contact (contact rating : 240 VAC,1A)			
Contact output (maintenance)	a-contact (contact rating : 240 VAC,1A)			
Display section	Dot matrix LCD (with backlight)			
Lightning protection	Built-in lightning protection circuit			
	Power supply section	±10kV (1.2/50μs)	Current output section	±10kV (1.2/50μs) ±5kA (8/20μs)
Operating temperature range	-10 to 55℃			
Protection level	IP66			
Options (sold separately)	The following options are available separately. Please contact us for any details. ・Converter stand ・Sunshade cover			

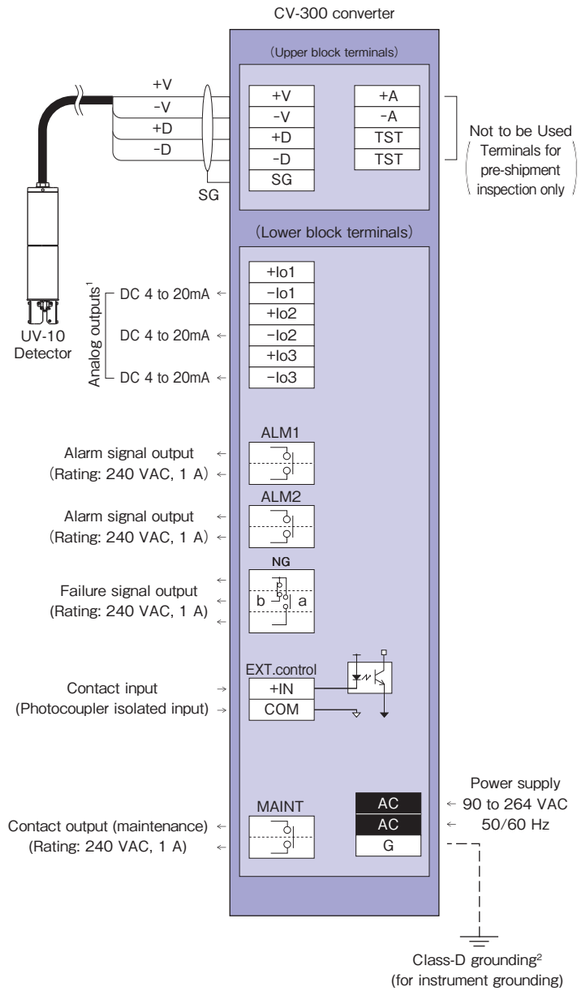
1: Converter mounting bracket and 50A pole mounting U-bolts (× 2) are provided with the product. Converter stand (including 50A pole) and water sampling unit are sold separately.
2: When in use with 100VAC power supply.
3: For details, see the Instruction Manual.
4: This is effective when the optional water immersion detection function is added.

Water sampling unit (option)

External dimensions[1]	Approx. 530 (W) × 1,481 (H) × 556 (D) mm (excluding protrusions)	
Material	SUS304 equivalent	
Weight	Approx. 26 kg (excluding pipes)	
Connection ports	Sample water intake	Rc1/2
	Bypass outlet	Rc1/2
	Overflow outlet	Rc1/2
	Drain	Rc1/2
	Water outlet	Rc1

1: Dimensions with converter mounted

Device wiring diagram



1:Output three analog signals selected from the six signal types indicated in the specifications table (analog outputs).
2:Be sure to connect the grounding terminal (G) to ground potential (Class D grounding: ground resistance of 100 Ω or less).