

Panasonic
ideas for life

UV Curing
System **Aicure**

LED Spot Type

UJ30/35



Easy Operation
High irradiation
performance

CE RoHS



3
Year
Warranty

Panasonic LED UV systems are very compact, Have lower energy consumption than And advanced features compared to

The AiCure is equipped with a temperature feedback controller originally developed by Panasonic.

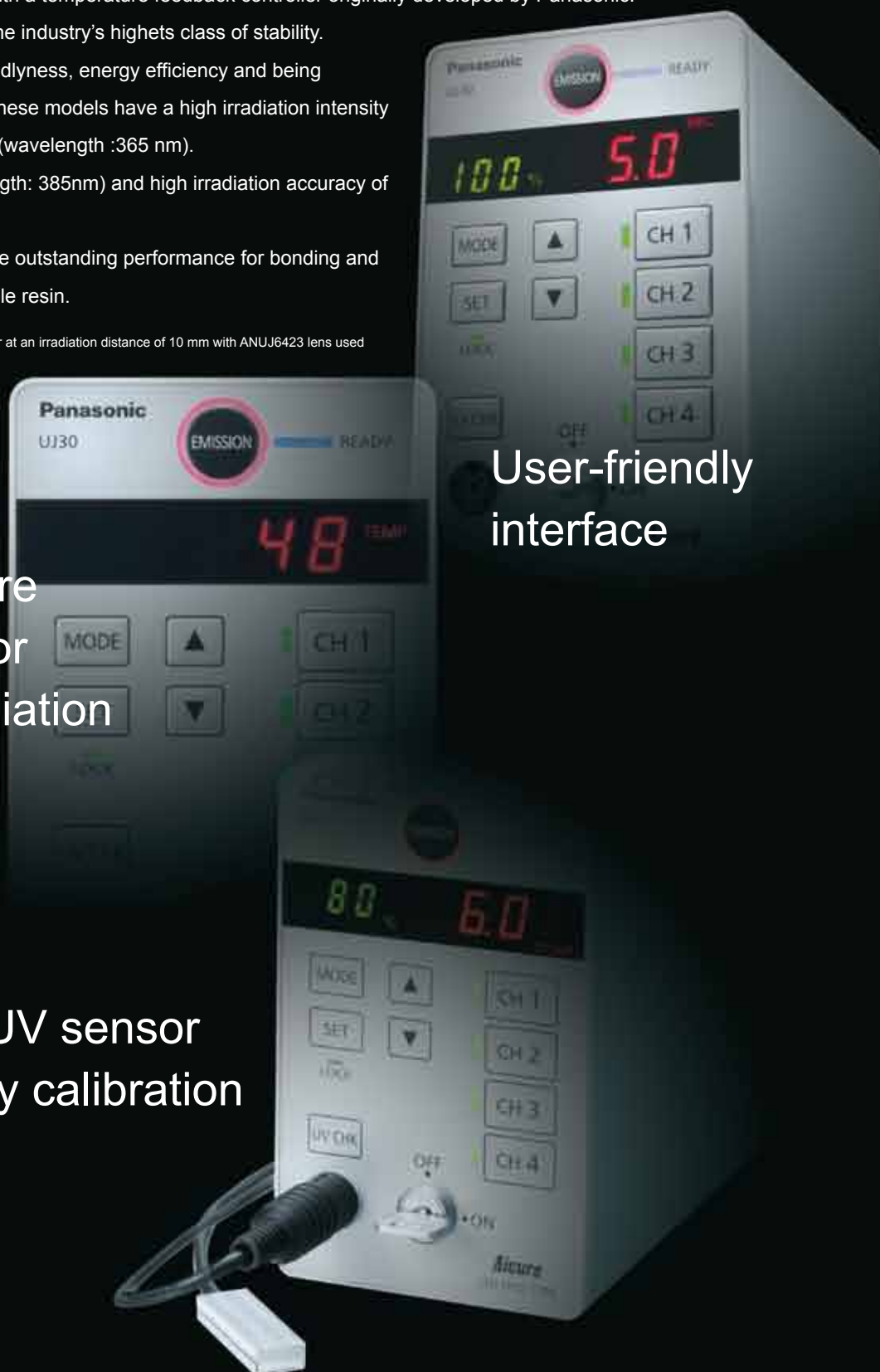
It's UV irradiation meets the industry's highest class of stability.

In addition to its user-friendliness, energy efficiency and being environmentally friendly, these models have a high irradiation intensity power* of 8,000 mW/cm² (wavelength :365 nm).

Or 9,200 mW/cm² (wavelength: 385nm) and high irradiation accuracy of $\pm 3\%$.

These new models provide outstanding performance for bonding and fixing using with UV curable resin.

* Measured by a 1-mm diameter sensor at an irradiation distance of 10 mm with ANUJ6423 lens used



User-friendly interface

Temperature feedback for stable irradiation

New slim UV sensor for intensity calibration

lamp systems

other LED UV systems

Two new controller selections for you applications

Standard model **UJ30**

Limited to most necessary and sufficient functions yet still provide highly reliable UV irradiation.



High performance model **UJ35**

A variety of functions will provide more advanced UV irradiation solution.



User-friendly	Easy-to-read display and easy-to-operate panel are as simple to use as a home appliance.	
Stable irradiation	The temperature feedback control (available only from Panasonic) provides excellent irradiation stability.	Only panasonic
Four-head irradiation	Different irradiation power and time can be set for each LED head attached to the controller. Both "all" and "individual" UV irradiation modes are available for synchronized or non-synchronized irradiation.	
Compact Size	It's compactness measures 80 mm (3.15") in width, 125 mm (4.9") in height, and 140 mm (5.5") in depth. It could fit into any small space.	Smallest in class
External control	UV irradiation can be externally controlled using the parallel I/O, enabling automatic control suitable for production lines.	UV irradiation operation can be externally controlled using the parallel I/O or the RS232C port, enabling automatic control suitable for production lines.
UV sensor	—	Irradiation intensity measurement and calibration can be done at the actual production line easily using the slim UV sensor.
Programmable irradiation	—	The programmable irradiation capability helps prevent curing distortion and enable high-quality precision bonding at a lower temperature increase.
Multiple setting profiles	—	Up to eight different irradiation patterns can be saved.
UJ35 software*	—	Free downloadable software available from our website for easy PC operation. Software will allow you to operate the unit from a PC. Also allows you to save irradiation programs. Japanese, English, Chinese and Korean languages available.
Global 3-year warranty	Guaranteed for three years from date of purchase (controller only). For details, please visit http://panasonic-denko.co.jp/ac/f/fasys/warranty/index.jsp	Only panasonic

* Downloadable from the following URL: <http://panasonic-denko.co.jp/ac/e/fasys/uv/led/uj30-uj35/index.jsp>

Quick & Easy setup immediately after installation

User-friendly interface



Simple interface

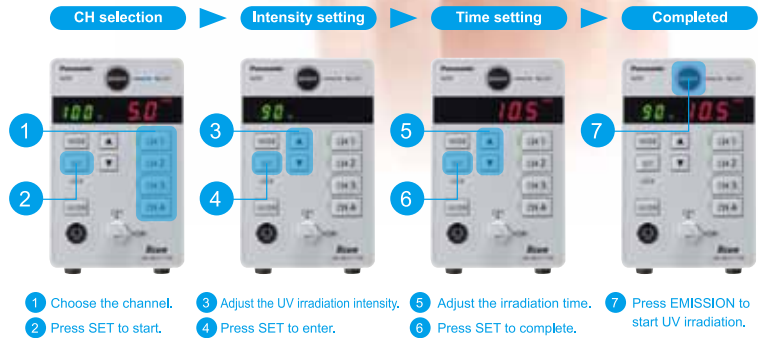
Easy-to-read display and easy-to-setup panel

Only three switches required for basic settings.

1. Choose LED head (CH1 to 4).

2. Set UV irradiation intensity (%).

3. Set irradiation time.

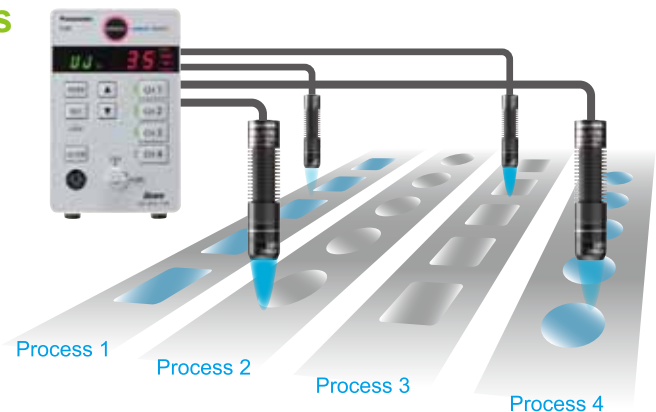


Four individually controllable heads

The irradiation power and time can be individually controlled.

The irradiation power, time, and timing of the LED heads can be individually controlled. With the lamp type model, one process requires one irradiation unit. With UJ30/35, one unit can be used for up to four processes due to its four individually-controllable LED heads.

It will also show a notice if any of the LED head reaches time to replace or when there is a temperature warning on one of the heads.



External control

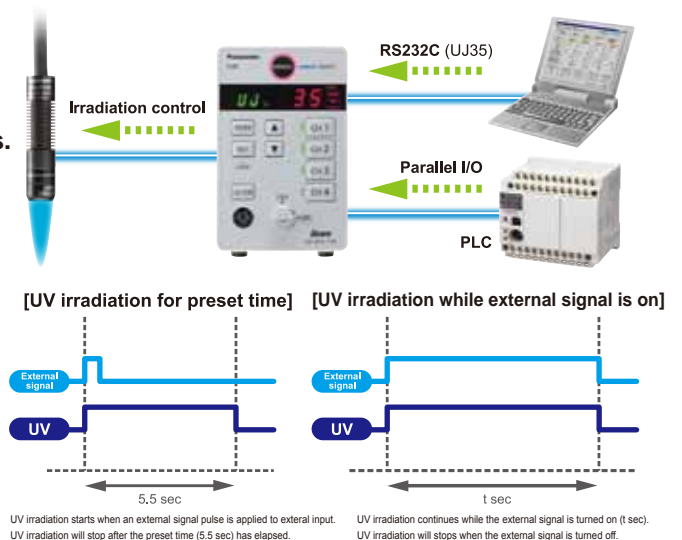
UV irradiation can be controlled by external signal inputs, enabling automatic control in production lines.

UV irradiation (time and timing) of the LED heads can be controlled by parallel signals from a programmable controller or other external devices.

A variety of control is possible. For example, irradiation time can be set up in increments of 0.1 seconds by the controller for each head.

And an external signals can be used to individually start or stop the UV irradiation of the LED heads. With UJ35, external control using RS232C communication port is available.

With the UJ35 Setup Tool (free)*, the setup process can be easily set up using a PC.



* Downloadable from the following URL: <http://panasonic-denko.co.jp/ac/e/fasys/uv/led/uj30-uj35/index.jsp>

Strict quality control

Stable Irradiation

Prevention of resin curing defects and bonding failures

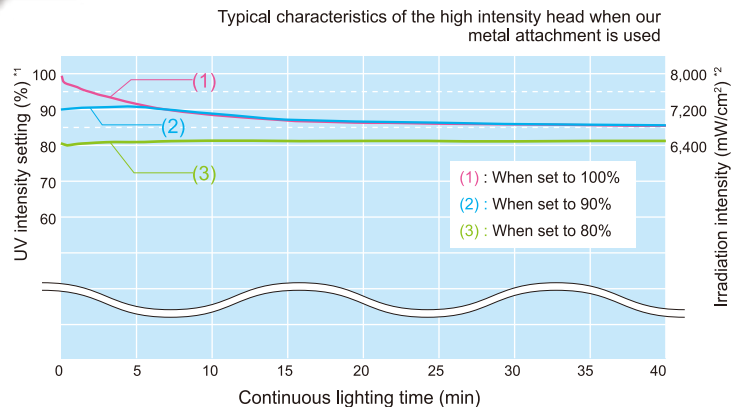
Temperature feedback control

±3% or better UV irradiation accuracy

(with the intensity set to 80%)

Generally, when the LED temperature rises, the UV irradiation output decreases. To prevent the temperature to rise, the LED heads are built with metal materials with fins to increase heat dissipation. The LED heads are also equipped with a built-in temperature sensor to feedback the temperature to the controller. The controller will calculate the loss of power due to temperature increase, enabling stable UV irradiation at an accuracy within ±3% when the intensity is set to 80%. This high performance is ideal for high-quality and precision bonding applications.

Panasonic's original



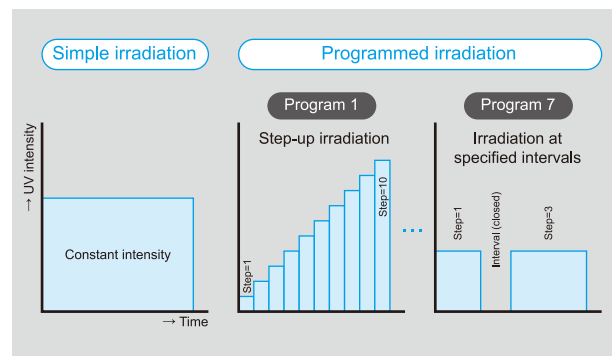
*1: "100" indicates the 100% intensity setting. *2: When equipped with the ANUJ6324 lens

Programmable irradiation function (UJ35) Program examples

This function prevents curing distortion and enables high-quality precision bonding.

The irradiation can be programmed to controls the irradiation power and time depending on the resin and curing application, supporting high-quality and high-precision bonding with minimum cure shrinkage.

In addition to the simple irradiation mode which irradiation is continuously performed at a constant intensity, up to seven different irradiation patterns (product types) can be programmed for each of the four LED head. This includes the step-up mode which the intensity is changed over time and the interval mode which irradiation is performed at specified intervals.



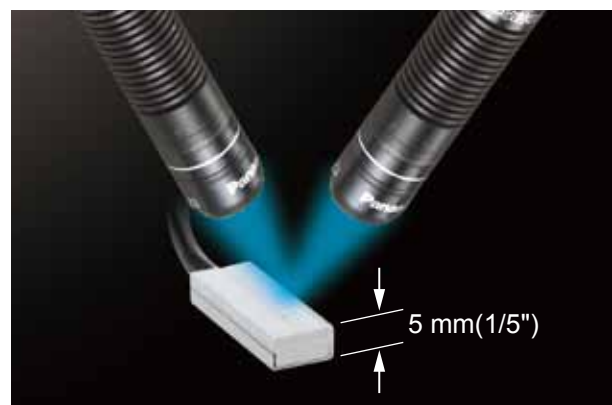
Significantly higher reliability for bonding and fixing

New slim UV sensor port (UJ35)

The UV sensor for measuring irradiation intensity enables calibration in high-accuracy.

The UV irradiation intensity of the LED heads can be measured at the actual workpiece position by using the optional slim UV sensor. It can also automatically calibrate the intensity to the preset level (available for both the intensity of a single head or for total intensity of multiple heads). Since the sensor only has 5-mm (1/5") thickness, which is similar to the workpiece, the intensity measurement is possible without removing the system from the production line, facilitating high-accuracy setting and in-line condition optimization. The irradiation intensity can be checked and adjusted at real time, enhancing the bonding and fixing reliability.

Panasonic's original

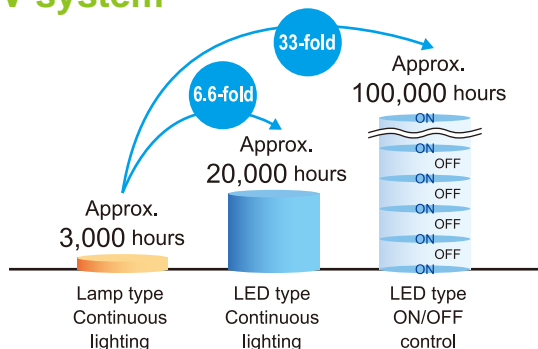


Reliable & Safe

Environmentally Friendly and Reliable

Frequent part replacement is reduced by LED technology.

Long-lasting economic LED type UV system



One of the biggest benefits of using the LED technology is that the light source life is much longer than lamps used in lamp type UV systems. The life of the lamp type is approx. 3,000 hours, but the LED has approx. 20,000 hours. Further more, unlike the lamp type, which needs to be kept turned on through out the operation, the LED can turn on instantly only when it is needed. When the irradiation ON/OFF time ratio is 1:4 (process cycle time = 5, irradiation time = 1), the LED operation life is equivalent to approx. 100,000 hours compared to lamp types, leading to significant reductions in running costs and hours for maintenance.

Reduction of CO₂ emissions and power consumption.

Low power consumption of 60 VA (at 100 V AC)

The power consumption is 60 VA (at 100 V AC) or lower even with all four heads turned on contributing to CO₂ reduction. Since the heat generation is also lower than lamp type systems, the power consumed by the air conditioner is also reduced when required to use in a small clean rooms.

Reliable operation anywhere in the world

Covered by the global 3-year warranty



'Guaranteed for three years from the date of purchase (main unit only), providing reliability even if the manufacturing line is at remote location.

For details, please visit our website

<http://panasonic-denko.co.jp/ac/ef/fasys/warranty/index.jsp>

Flexible cable will enable installation to even moving sections.

Standard Flexible head cables



Flexible cable has been adopted as the standard LED head connection cable considering that the LED heads will be mounted on to a moving section of the system.

Unlike quartz cables where there is a risk of damaging the cable by moving the cable too much, these flexible cables can be easily handled without risk of damageing. (withstanding 10 million bends to a radius of 33 mm based on our evaluation). The cables can be extended to a maximum of 10 m using extension cables, which also have the same flexibility.

[The minimum allowable bend radius for 5 m or longer cable (7.6-mm diameter) is 45.6 mm.]

Ideal for high-precision process. Helps reducing costs.

Fan-less structure

Without the need for a cooling fan, it is ideal for vibration-sensitive or dust-sensitive high precision applications. Also, this design reduces need for exhaust ventilation ducting and related installation work as well as the running costs for exhaust ventilation and air conditioning.

Lead and Mercury free

Eco product compliant with CE, RoHS, etc.



Unlike lamps LED heads do not contain mercury.

UJ30 and 35 conform to CE Marking, RoHS Directive, and Management Methods for Controlling Pollution by Electronic Information Products (China RoHS), ensuring environmentally safe use.

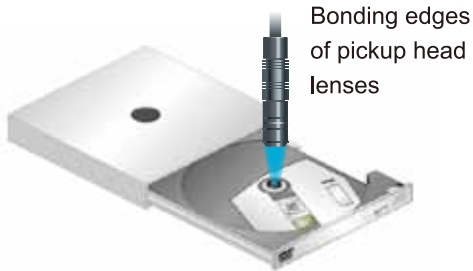
(Please follow the proper industrial waste disposal procedures.)

Ideal for preventing thermal and curing distortion

Application Examples

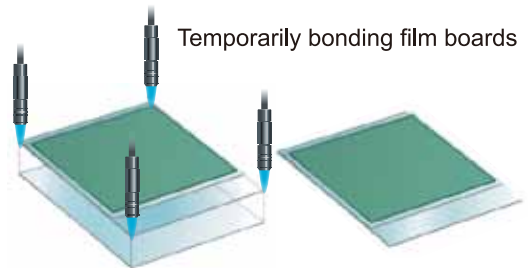
Digital home appliances

Bonding of lenses to optical pickup heads for personal computers



LCD

Temporarily bonding of film display boards



Medical equipment

Bonding of syringe needles

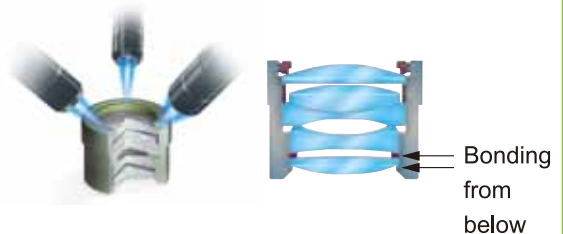
Bonding injection needles to hubs (bases)



Digital home appliances

Bonding camera lenses to optical tubes for digital cameras, mobile phones, etc.

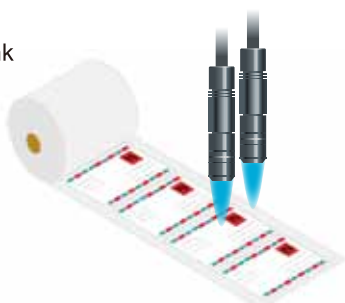
Bonding camera lens to optical tubes



Printing/Marking

Curing ink on labels/stickers

Curing ink

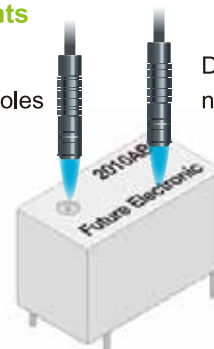


Electronic components

Curing printing ink on electronic components

Sealing degassing holes

Drying part/lot number printing ink



Covering a wide variety of applications

Heads & Lenses

Heads A 365-nm wavelength type and a 385-nm type are available, with a head length of 50 mm or 120 mm.

Directly connectable to the controller without a connection cable

Standard head:
365 nm wavelength

- Irradiation intensity: 7,500 mW/cm²



Standard head: 365 nm wavelength

For higher irradiation power or shorter cycle time

High intensity head:
365 nm wavelength

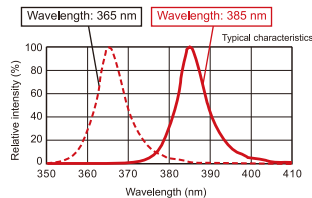
- Irradiation intensity: 8,000 mW/cm²



For curing deeper points of resin or curing resin through a film

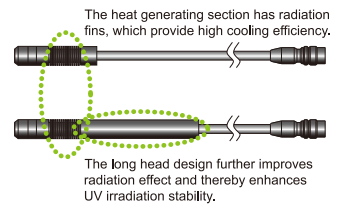
385-nm wavelength head

- Irradiation intensity: 9,200 mW/cm²

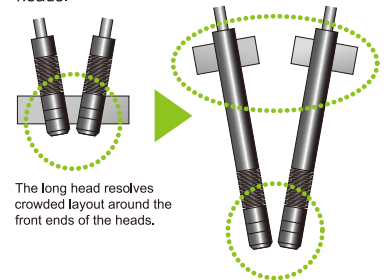


Head lengths selectable according to the installation location conditions

When a standard lens is attached, the head is the shortest in its class (50 mm). Further, the radiation fins provide adequate cooling performance.



The 120-mm long head has higher heat radiation performance. Since this type can be fixed by its rear part, other equipment can be easily added without crowding around the front ends of the heads.



Lenses A wide variety of irradiation options will meet various application requirements for bonding/fixing.

Basic type for making full use of the irradiation power

Standard lens

(Circular irradiation)

- ANUJ6423 (φ 3 mm)
- ANUJ6424 (φ 4 mm)
- ANUJ6426 (φ 6 mm)
- ANUJ6428 (φ 8 mm)
- ANUJ6420 (φ 10 mm)

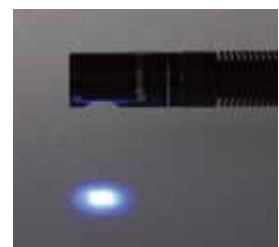


The right angle irradiation broadens the head installation options.

Side view lens

(Circular irradiation Angled at 90°)

- ANUJ6426SV (φ 6 mm)
- ANUJ6428SV (φ 8 mm)
- ANUJ6420SV (φ 10 mm)



For a wider irradiation area or to reduce the number of heads.

Cylindrical lens

(Elliptical irradiation)

- ANUJ6450S (R5)
- ANUJ6475S (R7.5)



For narrow point irradiation or fine bonding

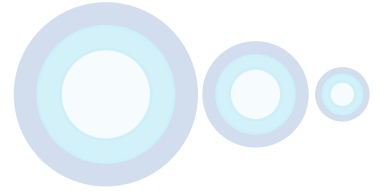
Rod lens

(Small diameter circular irradiation)

- ANUJ6447L (φ 4 mm)
- ANUJ6467L (φ 6 mm)



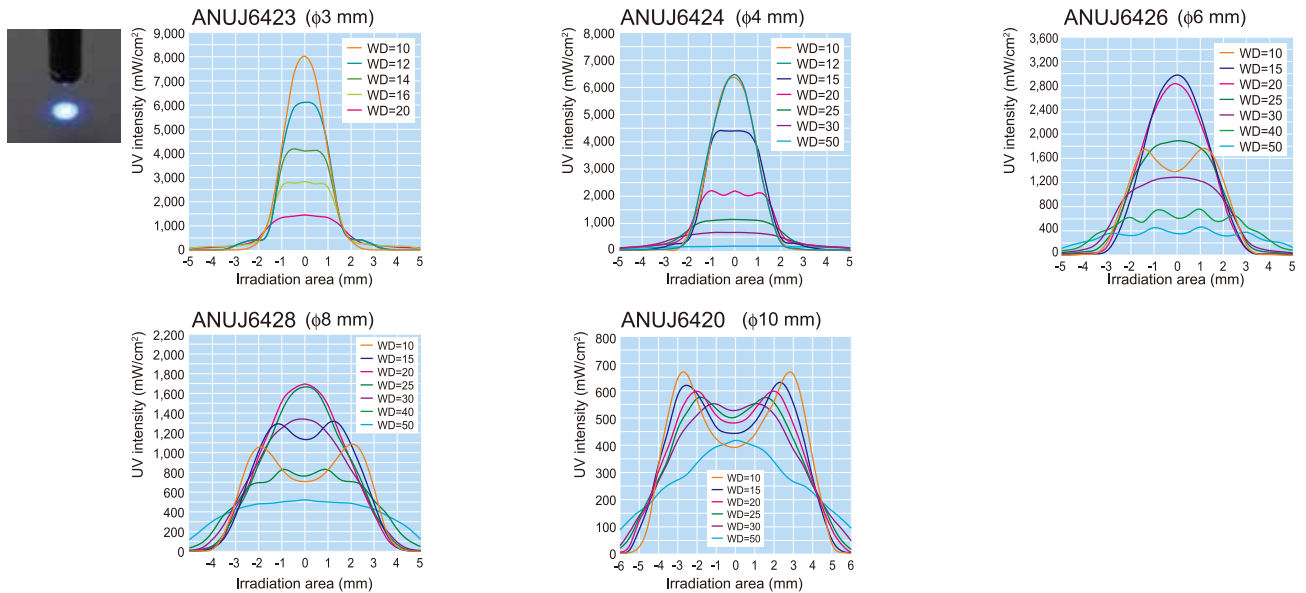
Intensity Profiles (Typical Examples)



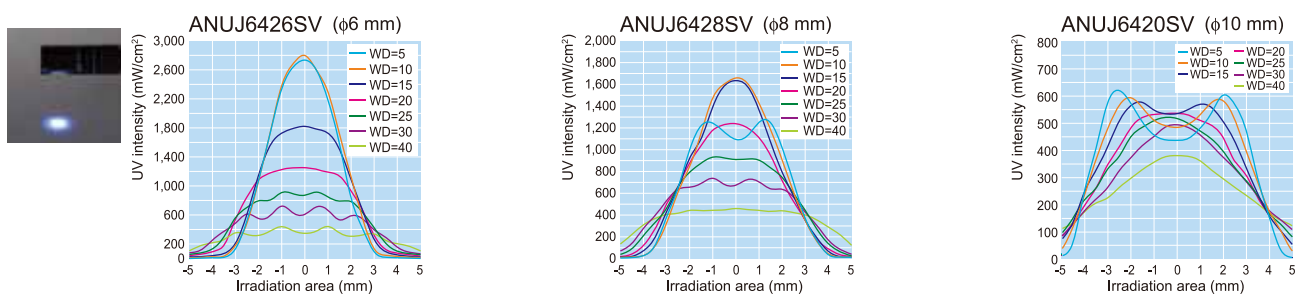
Standard head (ANUJ6162/6163)

For details, please visit the following URL: <http://panasonic-denko.co.jp/ac/e/fasys/uv/led/uj30-uj35/index.jsp>

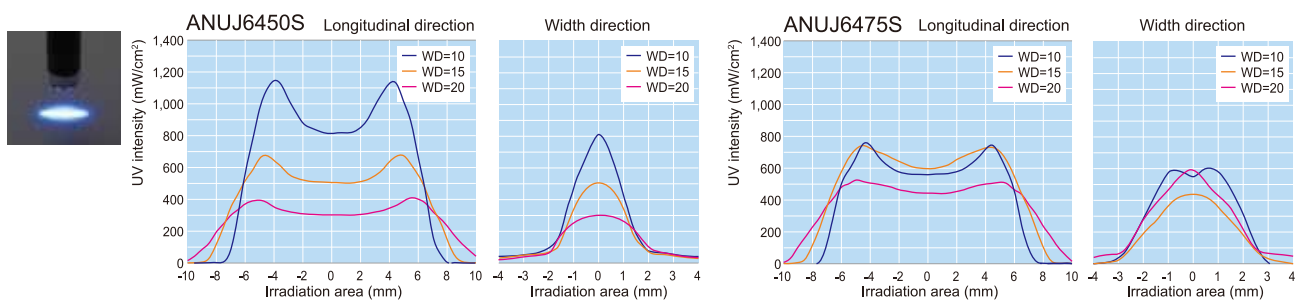
Standard lens



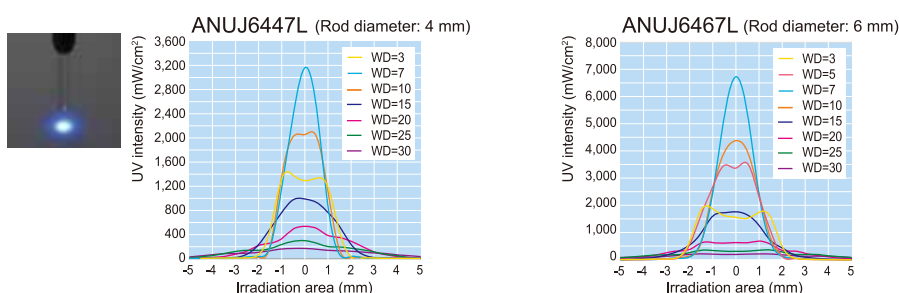
Side view lens



Cylindrical lens

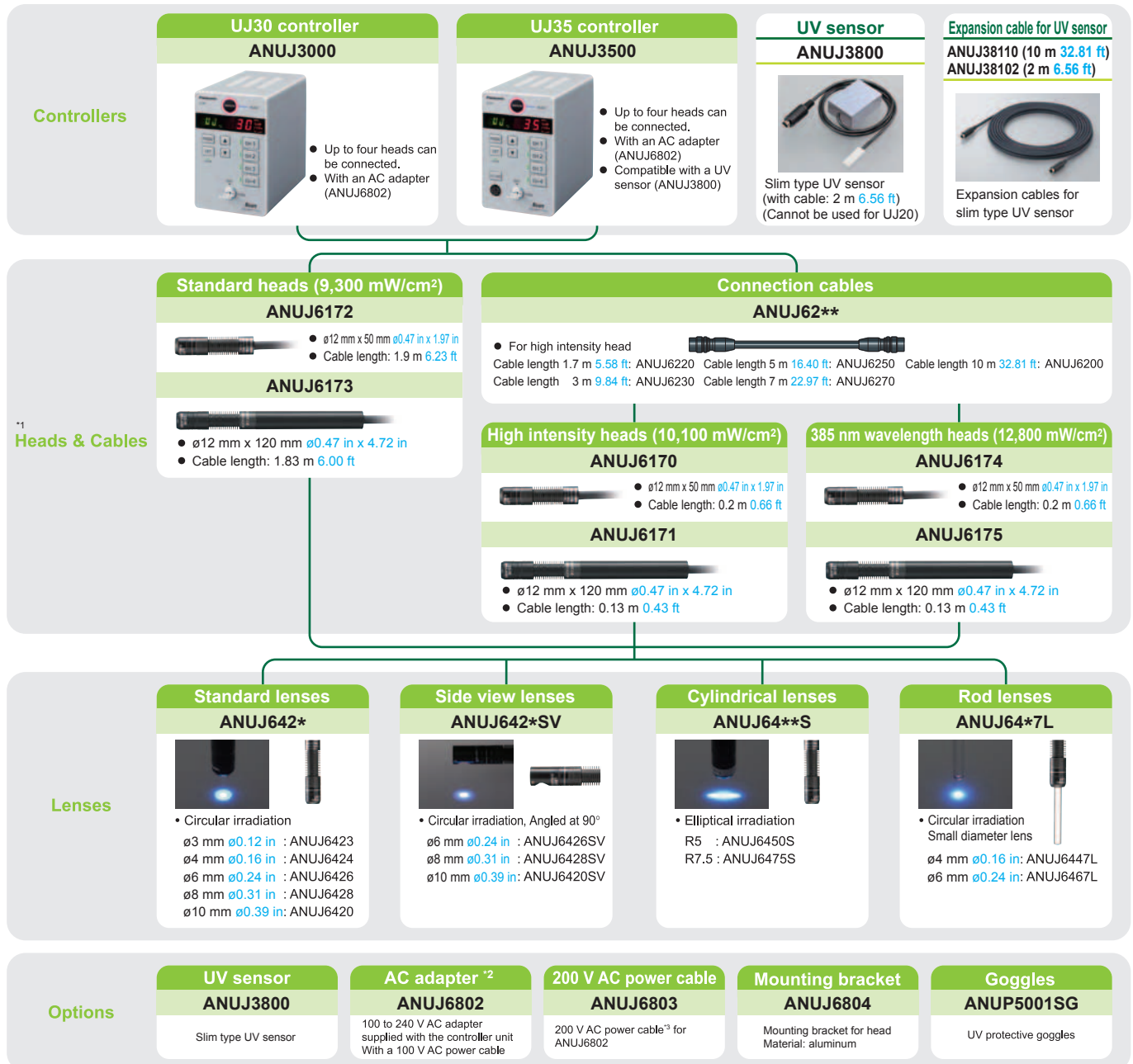


Rod lens



Wide variety Product Lineup

Application Guide



*1 The lens is not supplied with the head. *2 The ANUJ6802 AC adapter is supplied with the controller unit. The ANUJ6802 AC adapter is compatible with 100 to 240 V AC; however, the primary-side power cable is compatible with 100 V AC only. For use in a 200 V AC region, purchase the ANUJ6803 primary-side power cable (for 200 V AC) separately. *3 For China only

Specifications

Controllers

	UJ30 (Standard model)	UJ35 (High performance model)
Controller model No.	ANUJ3000	ANUJ3500
Connectable heads	1 to 4 heads	
UV sensor	Not compatible	Compatible
UV irradiation	One pattern in simple mode The heads are either collectively or individually controlled.	One pattern in simple mode and programmed irradiation (up to 7 patterns with up to 10 steps) The heads are either collectively or individually controlled.
Type switching	None (1 type)	Switchable (8 types)
Intensity/irradiation control	Digital intensity and irradiation control manual or timer control (0.1 to 99.9, 100 to 999 sec) Auto-tuning function using the UV sensor (UJ35 only) UV sensor specifications [Temperature characteristic ± 5 % F.S. (at 5 to 35°C 41 to 95°F) / repeated accuracy: ± 1 % (at 25°C 77°F)]	
Setting/Operation	Setting by the operation switches and power-on/off by a key switch RS232C (UJ35 setup tool)	
Display	7-segment display	
Cooling method	Natural cooling (without a fan)	
External control	Method	Parallel I/O RS232C Parallel I/O
	External input	Individual irradiation/irradiation stop input, interlock, full-irradiation input, and type switching
External output	READY signal, error signal, warning output, BUSY output (each head separately), and +5 V output (for indicators)	
Operating voltage	Supplied AC adapter: 100 to 240 V AC (±10%), 50/60 Hz, 60 VA (at 100 V AC)	
Operating temperature and humidity	0 to +35°C 32 to +95°F, 30 to 85% RH (No condensation at 25°C 77°F)	
Storage temperature and humidity	-10 to +60°C +14 to +140°F, 30 to 85% RH (No condensation at 25°C 77°F)	
Accessories	AC adapter, key and user's manual	
Weight	1,290 g approx. (Controller: 940 g and AC adapter: 350 g)	1,310 g approx. (Controller: 960 g and AC adapter: 350 g)

Heads

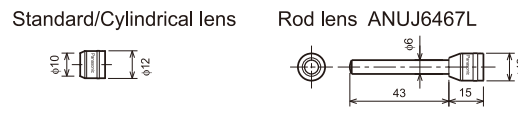
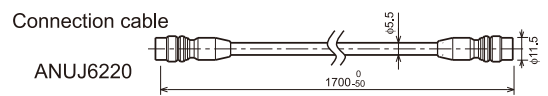
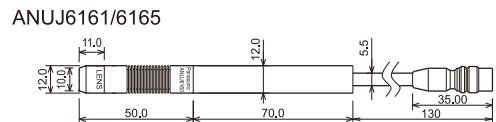
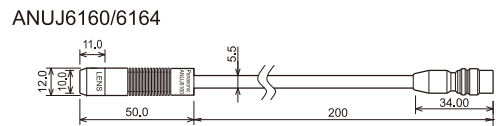
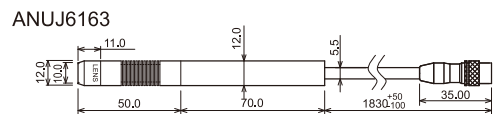
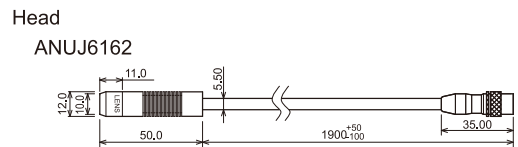
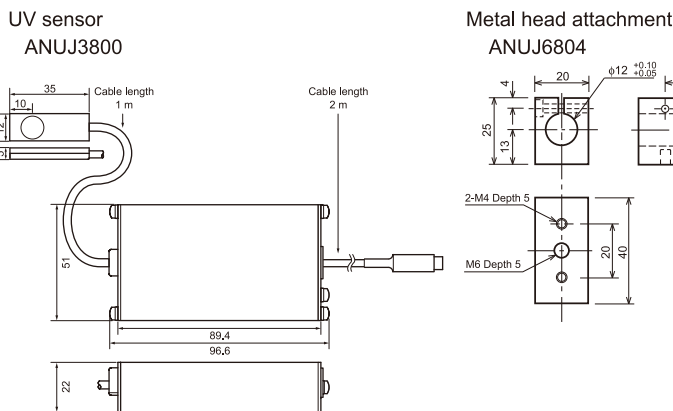
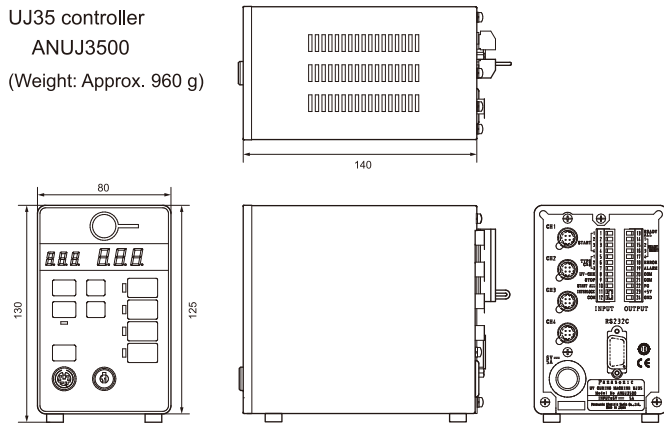
	Head model No.	ANUJ6172 ANUJ6173	
Standard head ¹⁾	Cable length	1.9 m 6.23 ft (ANUJ6172), 1.83 m 6.00 ft (ANUJ6173), directly connectable to the controller	
	Compatible lens	Spot diameter	ø3 mm ø0.12 in ø4 mm ø0.16 in ø6 mm ø0.24 in ø8 mm ø0.31 in ø10 mm ø0.39 in
		Lens model No.	ANUJ6423 ANUJ6424 ANUJ6426 ANUJ6428 ANUJ6420
	UV intensity (mW/cm ²) ²⁾	9,300, 7,900, 3,600, 1,700, 640	
Irradiation distance	10 mm 0.39 in 12 mm 0.47 in 20 mm 0.79 in 25 mm 0.98 in 30 mm 1.18 in		
High intensity head	Head model No.	ANUJ6170 ANUJ6171	
	Cable length	0.2 m 0.66 ft (ANUJ6170), 0.13 m 0.43 ft (ANUJ6171) A connection cable (1.7 m 5.58 ft/3 m 9.84 ft/5 m 16.40 ft/7 m 22.97 ft/10 m 32.81 ft) is required for connection to the controller.	
	Compatible lens	Spot diameter	ø3 mm ø0.12 in ø4 mm ø0.16 in ø6 mm ø0.24 in ø8 mm ø0.31 in ø10 mm ø0.39 in
		Lens model No.	ANUJ6423 ANUJ6424 ANUJ6426 ANUJ6428 ANUJ6420
UV intensity (mW/cm ²) ²⁾	10,100, 8,600, 3,900, 2,000, 710		
Irradiation distance	10 mm 0.39 in 12 mm 0.47 in 20 mm 0.79 in 25 mm 0.98 in 30 mm 1.18 in		
385-nm wavelength head	Head model No.	ANUJ6174 ANUJ6175	
	Cable length	0.2 m 0.66 ft (ANUJ6174), 0.13 m 0.43 ft (ANUJ6175) A connection cable (1.7 m 5.58 ft/3 m 9.84 ft/5 m 16.40 ft/7 m 22.97 ft/10 m 32.81 ft) is required for connection to the controller.	
	Compatible lens	Spot diameter	ø3 mm ø0.12 in ø4 mm ø0.16 in ø6 mm ø0.24 in ø8 mm ø0.31 in ø10 mm ø0.39 in
		Lens model No.	ANUJ6423 ANUJ6424 ANUJ6426 ANUJ6428 ANUJ6420
UV intensity (mW/cm ²) ²⁾	12,800, 10,300, 4,900, 2,600, 870		
Irradiation distance	10 mm 0.39 in 12 mm 0.47 in 20 mm 0.79 in 25 mm 0.98 in 30 mm 1.18 in		
Common item	Light source	Class 3B LED product	
	Estimated light source life ³⁾	20,000 hours (When the temperature of the LED in the head is 60°C 140°F or less.)	
	Operating temperature and humidity	+5 to +35°C +41 to +95°F, 30 to 85% RH (No condensation at 25°C 77°F)	
	Storage temperature and humidity	-10 to +60°C +14 to +140°F, 30 to 85% RH (No condensation at 25°C 77°F)	

¹⁾ The cable for standard heads is supplied in a fixed length.

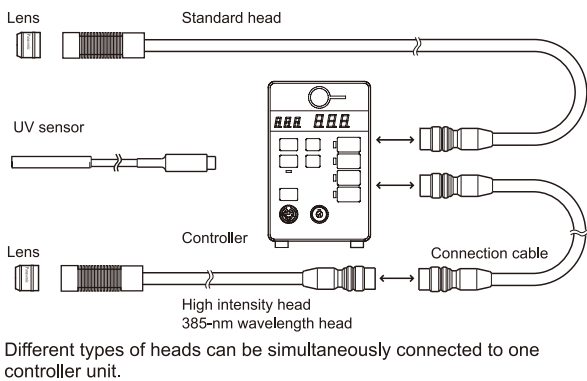
²⁾ When being fixed to the mounting bracket, the ambient temperature is 25°C 77°F, and the intensity is set to 100% (initial value)

³⁾ Not a guaranteed value.

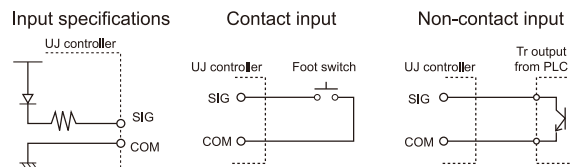
Dimensions (Unit: mm) Excluding the protruding sections



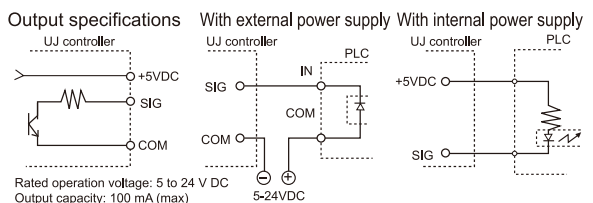
Configuration



I/O specifications



Open collector (Tr) or non-voltage input such as a relay



I/O list

INPUT		OUTPUT	
Terminal No.	Signal	Terminal No.	Signal
1	START1	13	READY-All
2	START2	14	READY/BUSY1 ^{*2}
3	START3	15	READY/BUSY2 ^{*2}
4	START4	16	READY/BUSY3 ^{*2}
5	TYPE Chg1 ^{*1}	17	READY/BUSY4 ^{*2}
6	TYPE Chg2 ^{*1}	18	ERROR
7	TYPE Chg3 ^{*1}	19	ALARM
8	UV CHECK ^{*1}	20	COM
9	STOP	21	COM
10	START-All	22	FG
11	INTERLOCK	23	+5VDC
12	COM	24	COM

*1: Nos. 5 through 8 (TYPE Chg1 through 3 and UV-CHECK) are functions available with UJ35 only. These terminals for UJ30 are spare.

*2: The READY/BUSY switching of Nos. 14 through 17 is performed on the UJ30/35 controller.

Safety precautions

This LED type UV curing system uses a Class-3B ultraviolet LED. Make sure to read the safety labels.

Japanese



English



Chinese (Simplified)



Other related products

Ideal for use with small-size equipment for positioning, detection of differences in levels, or detection of looseness



Ultra-compact laser sensor with built-in amplifier
EX-L200 Series

■ Major features

- 1. Ultra-compact**
The volume is down 67% from that of our general-purpose photoelectric sensor.
- 2. Easy alignment**
The bright beam facilitates optical axis alignment.
- 3. High precision**
For example, EX-L211 can detect an object with a diameter of a minimum of 0.3 mm.
- 4. User friendly**
The M3 screw holes allow secure fixing.
- 5. Environmentally resistant**
The IP67-rated protective structure is highly resistant to water and dust.

Leading-edge detection performance ideal for higher-speed equipment and finer workpieces



Digital Fiber Sensor
FX-500 Series

■ Major features

- 1. Remarkable reliability**
Enables substantive digital management.
- 2. Distinctive precision**
Accurately detects slight changes in light intensity.
- 3. Quick response**
25 μs quick response
- 4. New design**
Equipped with an easily viewable digital display and a small cover

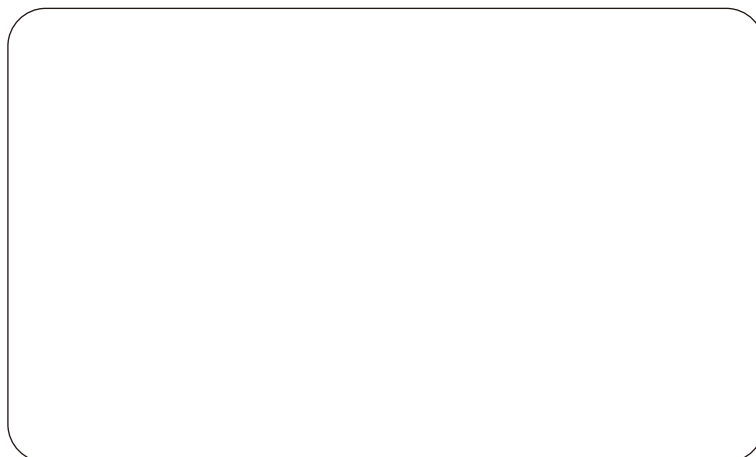
Ideal for static protection and productivity improvement of a variety of assembly processes



Ionizer FR-F Series

■ Major features

- 1. Compact and lightweight**
150 x 166 x 62 mm compact size and approx. 790 g lightweight body
- 2. Easy setting**
Usable for a variety of applications by simply replacing exchangeable louvers according to the target area of static protection
- 3. Easy maintenance**
The utilized discharge needles facilitate maintenance work.



Please contact

Panasonic Electric Works Co., Ltd.

Automation Controls Business Unit

■ Head Office: 1048, Kadoma, Kadoma-shi, Osaka 571-8686, Japan

■ Telephone: +81-6-6908-1050 ■ Facsimile: +81-6-6908-5781

panasonic-electric-works.net/ac

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