

LED Type / Lamp Type UV Curing System

Aicure SERIES

Energy saving, High brightness, High accuracy UV irradiation using LED type Complete range of Lamp type, too.

For resin curing in adhesion, printing, separation, coating, as a UV light source for inspection, and for other uses, for workpieces and applications, choose from our lineup.



The energy-efficient and high-precision UV irradiation systems come in the LED and lamp types to meet diverse requirements for a variety of workpieces.

Lineup

				Series	UV intensity	Advantages	Disadvantages
		Spot Type	UJ35	UJ30 / UJ35	with 22,000 mW/cm ²	■ Low thermal stress ■ Capable of irradiation ON / OFF control ■ Low power consumption ■ Stable UV irradiation ■ Long estimated light	
LED	Туре	Line Type		UD40 series	with 4,600 mW/cm ²	Source life Small size Does not generate ozone Exhaust duct not required	■ Requires UV resin that cures at a single wavelength 365 nm, 385 nm or 405 nm (405 nm type is available for combining with UJ30 / UJ35 only
		Line Type		UD90 series	with 10,000 mW/cm ²	■ Can be used with large equipment ■ Suitable for UV irradiation through polycarbonate (UJ30 / UJ35 \ 405 nm type	
		Spot Type		UP50	with 6,000 mW/cm ²		
Lamp	о Туре			ANUP8000 series	1.5 kW (Note) 3 kW (Note) 6 kW (Note)	■ Broad UV wavelength range (including heat rays)	■ High thermal stress ■ Short lamp life
		Tube Type		ANUP7000 series	3 kW (Note) 6 kW (Note)	■ Compatible with a variety of UV resins	■ Exhaust duct required (tube type)
				ANUP3000 series	1.5 kW (Note) 3 kW (Note)		

Applications

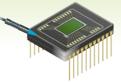
Bonding and curing applications



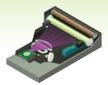
Assembly of lens modules



Fixing and bonding of camera modules



Adhesion of image sensor glass



Optical parts for printers and copiers



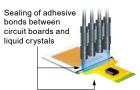
Resin coatings for printed circuit boards



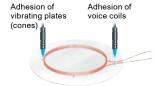
Adhesion of vehicle coil terminals



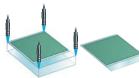
Sealing of LCDs and organic ELs



Reinforcement of UV resin at flexible board junctions



Adhesion of voice coils



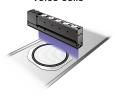
Temporary adhesion and permanent curing of touch panels



Reinforcement and waterproofing of vehicle-use connectors



Adhesion of touch panels and printed circuit boards



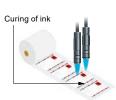
Curing and separation of dicing film and BG film



Adhesion of injection needles and medical devices



Curing of ink used to print text on electronic components



Curing of ink used to print labels



Manufacture of hybrid lenses



Hard coating for cases and all kinds of ornaments



Construction material and flooring coatings



UV printing UV ink jet printing

UV light sources for testing use



Luminescence testing of fluorescent substances



Testing for the presence of oil, grease, and other materials containing fluorescent substances



Alignment testing of transparent fluorescent substances

Featuring Panasonic high-efficiency lens *1 High-output Head equivalent to 20,000 mW/cm² class *2

High-output head equipped with new high-efficiency lens

Wavelength 365 nm ANUJ6186 Wavelength 405 nm ANUJ6189

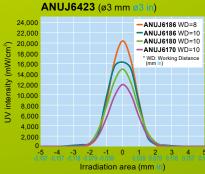
Wavelength 385 nm ANUJ6188

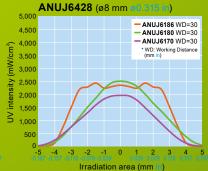
Standard type head inherits an existing intensity profile

Wavelength 365 nm ANUJ6180 Wavelength 385 nm ANUJ6184

Wavelength 405 nm ANUJ6187

UV intensity comparison with existing models





The intensity profiles shown are representative values, not guaranteed values. Install the metal attachment (ANUJ6804) or take other heat radiation measures.

Advantage -

Tact time can be significantly reduced



If the same UV intensity as the existing head model is required, output can be reduced, which will save power and extend LED life.



The UV irradiation area can be significantly expanded.



405 nm type Extend UV curing to coatings that were hard to irradiate. Now, you can even perform photo-curing of adhesion through glass or resin.

High-performance of High-output head brings real benefit! User-friendliness and Stable Irradiation

Controller selections for you applications UJ30 / UJ35

Controller selection for you applications	Standard model UJ30 Limited to most necessary and sufficient functions provides 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 LED head incorporates a temperature sensor. The excellent irradiation stability.	temperature feedback control provides Panasonic's original
Four-head irradiation	Different irradiation power and time can be set for each "individual" UV irradiation modes are available.	LED head attached to the controller. Both "all" and
External control	UV irradiation operation 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	_	UV intensity measurement and automatic calibration can be done at the actual production line using the slim UV sensor.
Programmable irradiation	_	The programmable irradiation function helps prevents curing distortion and enable high-quality precision bonding at a lower temperature.
Multiple setting profiles	_	Up to 8 different irradiation patterns can be saved.
UJ35 software (Note)	_	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 (contro http://industrial.panasonic.com/ac/e/fasys/warranty/ind	· unacomo c

Quick setup immediately after installation

User Friendly Interface

Simple interface

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

UJ30 / UJ35 can be easily set up like setting up a home appliance.

Only three switches required for basic settings.

- 1 Choose LED head (CH1 to CH4).
- 2 Set UV irradiation intensity (%).
- 3 Set irradiation time.

(0.0 sec. to 999 sec., continuous irradiation: [Con]) To set [Con], press "▼" once again at 0.0 sec. or press "▲" once again at 999 sec.



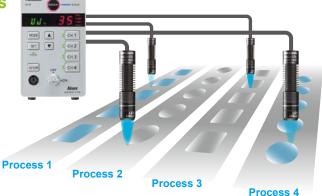
- Adjust the UV
 - Adjust the irradiation Press "SET" to enter.
 - Setting completed (Press "SET" to complete.)

to start UV irradiation. When it's pressed once again at "Con", UV irradiation stops.

Four individually controllable LED 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 / UJ35, one unit can be used for up to four processes due to its four individuallycontrollable 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 irradiation timing) of the LED heads can be controlled by parallel signals from a programmable controller or other external devices.

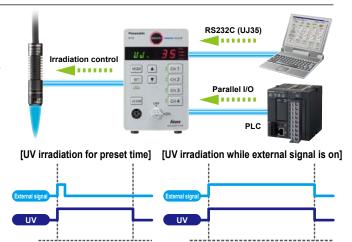
A variety of control is possible. For example, UV irradiation time can be set up in increments of 0.1 seconds by the controller for each LED head. And an external signals can be used to indivisually start or stop the UV irradiation of the LED heads. With UJ35, irradiation control using RS232C (Note 1) is available

"UJ35 software (free) (Note 2)," the setup process can be easily set up using a PC.

Notes: 1) Use straight RS232C for connection to PC or similar.

Cable side: D-sub connector 9-pin (female pin)

2) Downloadable from our website. http://industrial.panasonic.com/ac/e/fasys/software info/uv/tol uj30-uj35.jsp



t sec UV irradiation starts when an external signal pulse is applied to external input.
UV irradiation will stop after the preset time (t sec) has elapsed.

UV irradiation continues while the external signal is turned on (t sec)
UV irradiation will stop when the external

t sec

Strict quality control

Stable Irradiation

Prevention of resin curing defects and bonding faillures

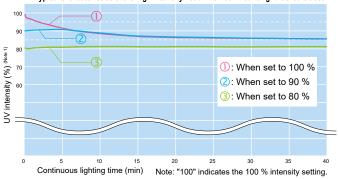
Panasonic's original

Temperature feedback control

 $\pm 3 \% or \ better \ UV \ irradiation \ accuracy \ (for \ wavelength \ 365 \ nm \ / \ 385 \ nm \ type \ with \ the \ intensity \ set \ to \ 80 \ \%)$

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.

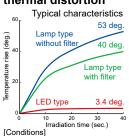
■ Typical characteristics of the high intensity head when our mounting bracket is used



Infrared rays-free UV irradiation

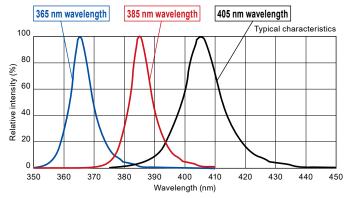
High-accuracy bonding without thermal distortion

The LED heads irradiate 365 nm, 385 nm wavelength UV rays or 405 nm short wavelength, which do not contain infrared rays (heat) unlike the light from the lamp type system, preventing the temperature rise of workpieces. This is ideal for applications that require high precision bonding with minimum thermal distortion, such as the assembly of thin plastic lenses.



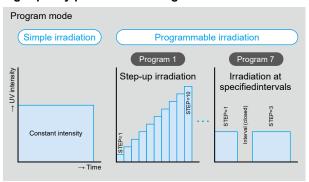
[Conditions]
Workpieces: Optical pickup lenses
UV intensity: 250 mW/cm²
Irradiation distance: 20 mm 0.787 in

■ LED emission spectrum



Programmable irradiation function (for UJ35)

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 appication, 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 10 steps 7 different irradiation patterns (7 product types) can be programmed for each of the four LED head.

Significantly higher reliability for bonding and fixing



Slim UV sensor (for UJ35)

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



The UV irradiation intensity of the LED heads can be relative measured at the actual position by using the optional slim UV sensor (Note). It can also automatically adjust the UV intensity to the preset level. Since the sensor only has 5 mm 0.197 in 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 UV intensity can be checked and adjusted at real time, enhancing the bonding and fixing reliability.

Note: UV intensity can be measured as a relative value.

Sensitivity adjustment of the UV sensor is carried out at 365 nm, if you use the UV sensor at 385 nm or 405 nm, the displayed value may be greater than the actual UV intensity.

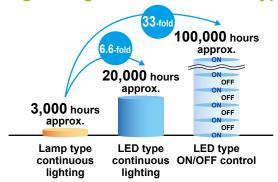
For more information, please consult us.

Safe and reliable

Environmental Consciousness and Reliable

Frequent part replacement is reduced by LED type.

Long-lasting cost effective LED type



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

You can see LED head temperature readings on the display!



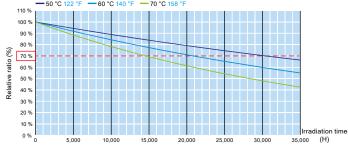
Designed to dissipate heat, estimation of life is easy.



While the display is showing irradiation conditions, you can see the temperature of the LED head simply by pressing the MODE button. The controller is designed to dissipate heat, and it is easy to estimation of life.

■ Estimated life according to LED temperature (The value is not a guaranteed value.)

— 50 °C 122 °F — 60 °C 140 °F — 70 °C 158 °F



Reliable operation anywhere in the world



Covered by the global 3-year warranty



Guaranteed for three years from the date of purchase (controller only), providing reliablility even if the manufacturing line is at remote location. For details, please visit our website

Flexible cable for LED head 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. Unlike silica fiber 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 1.299 in based on our evaluation). The cables can be extended to a maximum of 10 m 32.808 ft using extension cables, which also have the same flexibility.

(The minimum allowable bend radius for 5 m 16.404 ft or longer cable diameter ø7.6 mm ø0.299 in is R45.6 mm R1.795 in.)

Ideal for high-precision process. Helps reducing costs.

Cooling fan-less structure

Without the need for a cooling fan, it is ideal for vibrationsensitive or dust-sensitive high precision process. 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 **UJ35** 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.)

Available for worldwide use

We have local sales companies to support the expansion of customers' global operations. Please visit our website to see our worldwide sales network.

http://industrial.panasonic.com/ac/e/salesnetwork/index.jsp

Intensity Profiles (Typical example)

Featuring Panasonic high-efficiency lens (Note)

High-output head UV wavelength 365 nm (ANUJ6186)

Note: Lens embedded in the head of ANUJ6186, ANUJ6188 or ANUJ6189

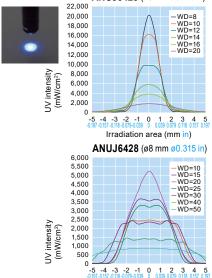
ANUJ6423 (ø3 mm ø0.118 in)

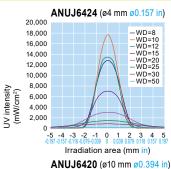
Irradiation area (mm in)

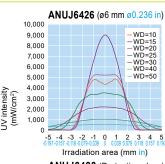
Please see the Web site for intensity profiles data of UV wavelengths 385 nm (ANUJ6184, ANUJ6188) and 405 nm (ANUJ6187, ANUJ6189). http://industrial.panasonic.com/ac/e/fasys/uv/led/uj30-uj35/data/index.jsp

Standard lens and Protective glass

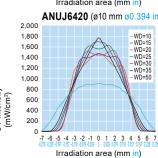
* WD: Working Distance (mm)

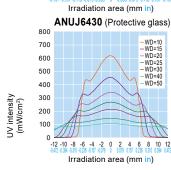






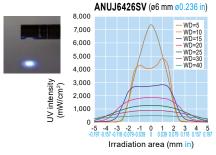


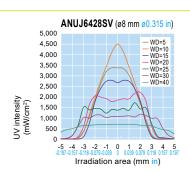


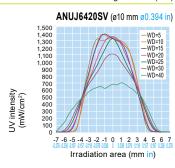


Side view lens

* WD: Working Distance (mm)

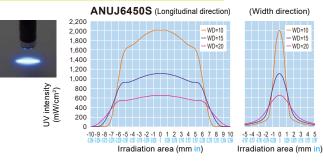


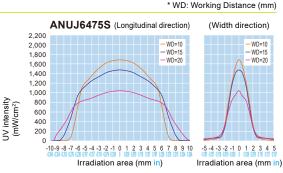




Cylindrical lens

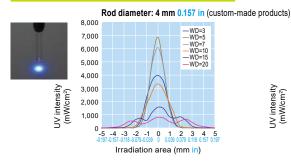
* WD: Working Distance (mm)

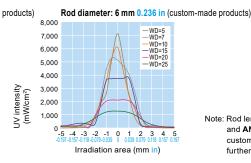




Rod lens

* WD: Working Distance (mm)





Note: Rod lens combined with ANUJ6186, ANUJ6188 and ANUJ6189 high-output heads are treated as custom-made products. Please consult us for further information.

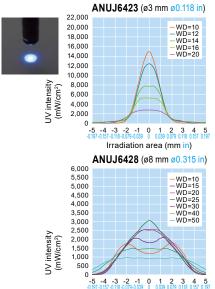
Inherits an existing intensity profile

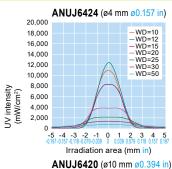
Standard type head UV wavelength 365 nm (ANUJ6180)

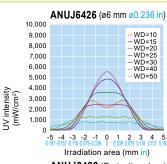
Please see the Web site for intensity profiles data of UV wavelengths 385 nm (ANUJ6184, ANUJ6188) and 405 nm (ANUJ6187, ANUJ6189). http://industrial.panasonic.com/ac/e/fasys/uv/led/uj30-uj35/data/index.jsp

Standard lens and Protective glass

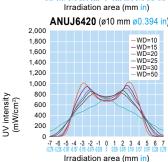


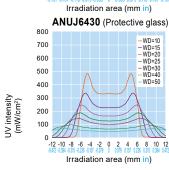






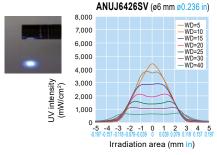




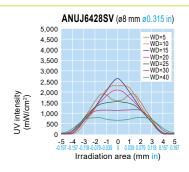


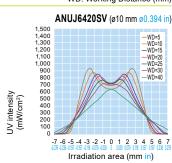
Side view lens

* WD: Working Distance (mm)



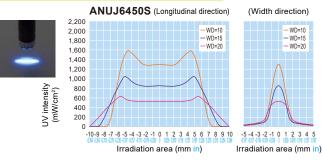
Irradiation area (mm in)

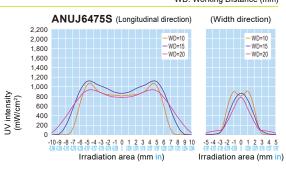




Cylindrical lens

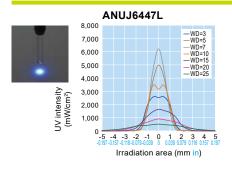
* WD: Working Distance (mm)

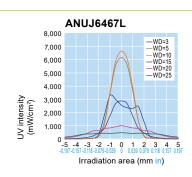




Rod lens

* WD: Working Distance (mm)





Wide variation Product Lineup



Irradiation distance

able length

Notes: 1) The head does not come with a lens.
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. Primary-side A-type plug. (Since this product is not PSE Mark compliant, it cannot be connected directly to a lamp line in Japan.)

Heads

Specifications

Contro	llers					
Controller F	roduct type	UJ30 (Standard model)	UJ35 (High performance model)			
Controller Part No.		ANUJ3000	ANUJ3500			
Connecta heads	ible	1 to 4	heads			
Connectal sensor	ole UV	Not compatible	Compatible			
UV irradia	ation	One pattern irradiation in simple mode The heads are either collectively or individually controlled.	One pattern in simple mode and programmed pattern irradiation (up to 7 patterns with up to 10 steps) The heads are either collectively or individually controlled.			
Pattern s	witching	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 (for UJ35 only) Specifications of UV sensor: [Temperature characteristic: ±5 % F.S. (+5 to +55 °C 41 to 95 °F) / Repeat accuracy: ±1 % (25 °C 77 °F)]				
Setting/O	peration	Setting by the operation switches and power-on/off by a key switch	Setting by the operation switches, power-on/off by a key switch and RS232C (UJ35 setup tool)			
Display		7-segment display				
Cooling s	ystem	Natural cooling (without a fan)				
	Method	Parallel I/O	RS232C, Parallel I/O			
External	External input		top input, interlock, full-irradiation input, g (for UJ35 only)			
control	External output	READY signal, error signal, alarm output, BUSY output (each head separatel +5 V output (for indicator)				
Operating	g voltage	With AC adapter: 100 - 240 V AC (±10 %) 50 / 60 Hz 60 VA (at 100 V AC)				
Ambient temperature / humidity range		0 to +35 °C 32 to 95 °F / 30 to 85 % RH (no condensation)				
Storage temperature / humidity range		-10 to +60 °C 14 to 140 °F / 30 to 85 % RH (no condensation)				
Accessor	ies	AC adapte	er and Key			
Weight		1,180 g approx. (Controller: 940 g approx., AC adapter: 240 g approx.)	1,200 g approx. (Controller: 960 g approx. AC adapter: 240 g approx.)			

	Head model	No.				J6186			
365 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Period	
wavelength high-output head	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
	UV intensity	(mW/cm²) (Note 1)	17,200	14,940	7,560	4,450	1,360	530	
	Irradiation di	stance	8 mm 0.315 in	10 mm 0.394 in	15 mm 0.591 in	20 mm 0.787 in	30 mm 1.181 in	10 mm 0.394 ir	
	Head model	No.			ANU	J6180			
365 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Pens	
wavelength	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
standard type	UV intensity	(mW/cm²) (Note 1)	12,500	10,600	4,720	2,500	580	300	
	Irradiation di	stance	10 mm 0.394 in	12mm 0.472 in	20 mm 0.787 in	25 mm 0.984 in	30 mm 1.181 in	10 mm 0.394 ir	
	Head model	No.			ANU	J6188			
385 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Period	
wavelength high-output	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
head	UV intensity	(mW/cm²) (Note 1)	19,500	16,920	8,680	4,750	1,400	580	
	Irradiation distance		8 mm 0.315 in	10 mm 0.394 in	15 mm 0.591 in	20 mm 0.787 in	30 mm 1.181 in	10 mm 0.394 ir	
	Head model No.		ANUJ6184						
385 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Period	
wavelength	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
standard type	UV intensity	(mW/cm²) (Note 1)	14,700	11,700	5,800	2,790	590	330	
	Irradiation di	stance	10 mm 0.394 in	12mm 0.472 in	15 mm 0.591 in	20 mm 0.787 in	30 mm 1.181 in	10 mm 0.394 ir	
	Head model	No.	ANUJ6189						
405 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Period	
wavelength high-output	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
high-output head	UV intensity (mW/cm²) (Note 1)		20,900	17,800	9,190	5,450	1,790	810	
	Irradiation di	stance	8 mm 0.315 in	10 mm 0.394 in	15 mm 0.591 in	20 mm 0.787 in	30 mm 1.181 in	10 mm 0.394 ir	
	Head model	No.				J6187			
405 nm	Compatible	Spot diameter	ø3 mm ø0.118 in	ø4 mm ø0.157 in	ø6 mm ø0.236 in	ø8 mm ø0.315 in	ø10 mm ø0.394 in	Protective glass Period	
wavelength standard	lens	Lens model No.	ANUJ6423	ANUJ6424	ANUJ6426	ANUJ6428	ANUJ6420	ANUJ6430	
tuno	UV intensity	(mW/cm²) (Note 1)	15.500	12.600	5.730	3.150	890	440	

10 mm 0.394 in 12mm 0.472 in 20 mm 0.787 in 25 mm 0.984 in 30 mm 1.181 in 10 mm 0.394 in

Class 3B LED product (JIS CS8922005). Risk group 3 (ANUJ6187 ANUJ6187: Risk group 2) (JEC 62471)
20,000 hours (when the LED temperature inside the head is 60°C 140°F)
0,2 m 0.65 ft A connection cable is required to connect the high-output head to a UI series controller.
+50 to +55 °C +41 to +55 °F /3 01 to 55 % RH (No condensation)
-10 to +60 °C +14 to +140 °F /30 to 85 % RH (No condensation) Notes: 1) The value were measured using a UJ30 / UJ35 illuminometer with a mm a0.039 in sensor hole when the high-output heads were fixed to the attachment, the ambient temperature was maintained at 25 °C 77 °F by the UJ30 / UJ35, and they were turned on with 100% output (initial value; based on Panasonic's reference measurement method).

Since the LED elements show illumination intensity fluctuations, the actual UV intensity may be more than 20 % higher.

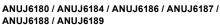
2) It is recommended that protective glass (ANUJ6430) be used to protect the head-side lens from contamination when the high-output head is used without a lens. For further information about protective glass, contact our sales office.

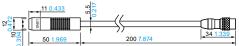
3) The value is not a guaranteed value.

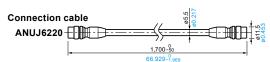
Dimensions (Unit: mm in) Excluding the protruding sections

UJ30 / UJ35 UJ35 Controller UV sensor ANUJ3800 ANUJ3500 Cable length (Weight: 960 g approx.) **UJ30 Controller** 0000000000000000000 **ANUJ3000** (Weight: 940 g approx.) 140 5.512 80 3.150 Mounting bracket for head BER EEE 89.4 3.520 ANUJ6804 Ø12+0.05 1254 ᆸ 0 **(** 2-M4 Depth 5 10.5 0.413 (11.3) (0.445) M6 Depth 5 0. AC adapter ANUJ6802 1830 72.04 121 4.764 800 31.496 Ferrite core: 14.2 × 28.5 × 8.2

Head sections (with standard lens)





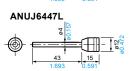




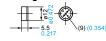




Ø0.315 14 0.551

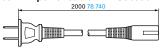


Protective glass



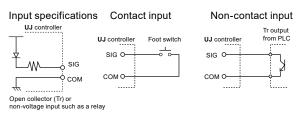
Configuration Lens Head section Connection cable UV sensor Controller Controller Four heads can be simultaneously connected to one controller.

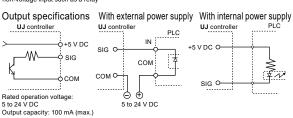
200V AC power cable ANUJ6803



* Type A plug

Input and Output specifications





I/O list

	INPUT	0	UTPUT
Terminal No.	Signal	Terminal No.	Signal
1	START1	13	READY-AII
2	START2	14	READY/BUSY1 (Note 2)
3	START3	15	READY/BUSY2 (Note 2)
4	START4	16	READY/BUSY3 (Note 2)
5	TYPE Chg1 (Note 1)	17	READY/BUSY4 (Note 2)
6	TYPE Chg2 (Note 1)	18	ERROR
7	TYPE Chg3 (Note 1)	19	ALARM
8	UV CHECK (Note 1)	20	COM
9	STOP	21	COM
10	START-All	22	FG
11	INTERLOCK (Note 3)	23	+5 V DC
12	СОМ	24	COM

Notes: 1) Nos. 5 / 6 / 7 / 8 (Type-Chg 1 / 2 / 3 and UV-CHECK) are functions

available **UJ35** only.

These terminals for **UJ30** are spare.

- The READY/BUSY switching of Nos. 14 / 15 / 16 / 17 is performed on the UJ30 / UJ35 controller.
- 3) At shipment, for B-contact (allows irradiation when ON), No.11 (INTERLOCK) is connected to No.12 (COM) by a short-circuit line.

Panasonic original LED provides a UV intensity* of 4,600 mW/cm².

* Wavelength: 385 nm <mark>0.015 mil,</mark> Irradiation distance: 10 mm <mark>0.394 in</mark> Based on our company's measurement standards. Values are typical, but not guaranteed.

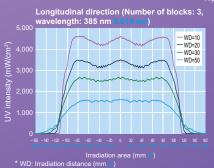
The wavelength 365 nm 0.014 mil type and 385 nm 0.015 mil type are available.

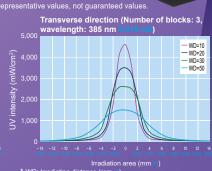
Air cooling method

Water cooling equipment is not required since the unit is fan-cooled.

Compact equipment makes installation easy.

■Illumination profile (Example) Note: The intensity profiles shown are representative values, not guaranteed value





Multiple Size Variations

Six sizes are available for use in various applications.



Compact Size Makes Installation Easier

This compact equipment can be installed in a small space. Provides greater flexibility in choosing the installation location



Why is the UV intensity high?



The LED's capabilities are maximized by its cooling structure and a small size was also achieved.





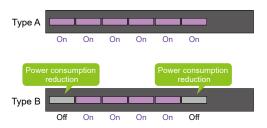


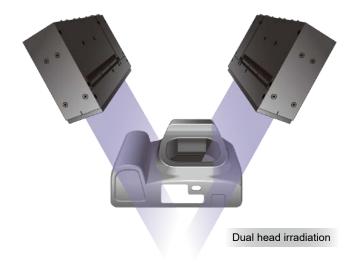
Flexible UV Irradiation Patterns

Block-level UV intensity control

UV irradiation can be controlled separately for each block in the head. This enables UV irradiation according to the workpiece shape and also reduces power consumption by turning off the LEDs where UV irradiation is not needed.

■UV irradiation pattern example (6 blocks)



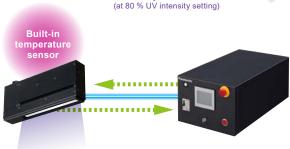


UV Irradiation Stability

No more resin curing defects or adhesion errors

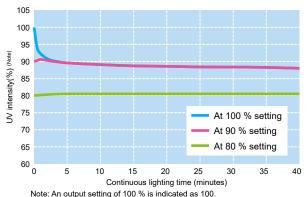


Provides UV irradiation accuracy within ±5 %.



Generally, an increase in LED temperature reduces the UV irradiation output. However, the **UD40** series employs a Panasonic original head cooling mechanism to suppress temperature increases. Further, a temperature sensor is built into the head to constantly monitor and feed back temperature information. This has resulted in a superb UV irradiation stability within ±5 % for output up to 80 %. This is ideal for high quality, precise adhesion applications.

■Typical characteristics (25 °C 77 °F atmosphere)

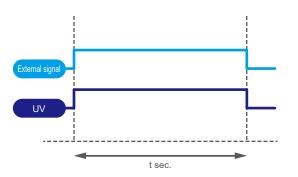


External Access Control

Control UV irradiation from an external device. UV irradiation can be applied only during the required time period.



UV irradiation during the required time period



UV irradiation continues during the time period (t sec.) that the external signal is on. UV irradiation stops when the signal is turned off.

UV irradiation from the head can be controlled using a parallel signal from a PLC or other external device.

Note: From detection of external signal ON, up to about 500 msec is required for UV illumination to reach the set value (necessary for overcurrent protection).

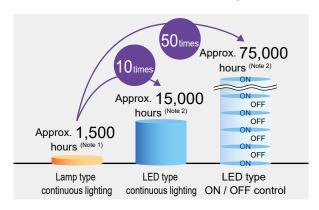
Operating Time and Temperature Display Functions

Notification of LED replacement period and abnormal temperature

The number of hours of lighting is counted for each LED block in the head. When a specific number of hours is reached, the LED replacement period is indicated through the controller's external output and panel display. In addition, because the head has a built-in temperature sensor, the LED temperature during operation can be displayed. If an abnormal temperature is detected, the controller sends a warning through its external output and panel display. These functions ensure safety and improve productivity.

Long-life, Economical LED Type

LED type makes frequent replacement of service parts unnecessary.

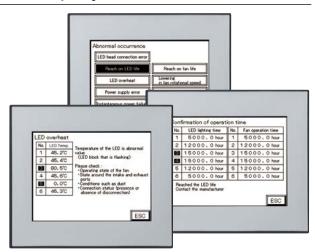


The LED type features extremely long light-source life span compared to the lamp type. As compared to the estimated lamp life span of 1,500 hours (Note 1), the estimated LED life span is 15,000 hours (Note 2).

Furthermore, unlike the lamp type that remains on at all times, the LED type can be turned on only when UV irradiation is needed. If the irradiation on/off time ratio is 1:4 (process takt time = 5, irradiation time = 1), this calculates to a life span of approximately 75,000 hours (Note 2), which can drastically reduce running cost and maintenance man-hours.

Notes: 1) Our straight tube type

2) At an ambient operating temperature of +25 °C +77 °F



Low Power Consumption at 100 W per LED Block

Reduces running cost and CO₂

Even when six blocks in a single head are turned on, the maximum power consumption is 650 W (at 200 V AC). This effectively reduces power consumption and CO_2 emission. Since less heat is generated than the lamp type, even when the system is used in a small clean room, the increase in room temperature is small. This reduces the power needed for air conditioning.

Eco product compliant with CE, RoHS, etc.

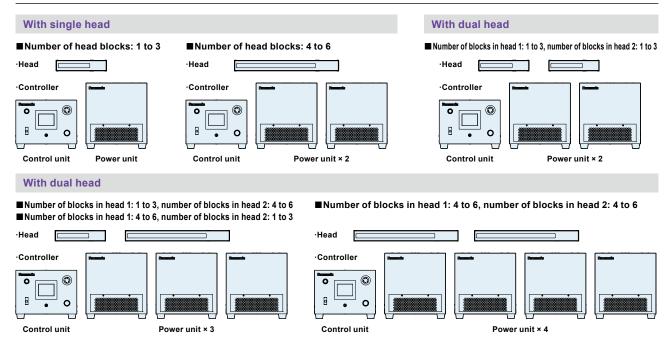




Unlike lamp type, LED type heads do not contain mercury. **UD40** conform to CE Marking, RoHS Directive, and Management Methods for Controlling Pollution by Electronic Information Products (China RoHS), ensuring environmentally safe use. (Please follow the proper industrial waste disposal procedures.)

Switching from lamp type UD40 UD40 UV intensity distribution of spot type (Typical example) Exhaust air duct not required Space-saving Power saving Switching from spot type connection style to line type (Typical example) UV intensity distribution of line type (Typical example) ANUJ869S (wavelength: 365 nm 0.014 mil, irradiation distance 20 mm 0.787 in) Power saving UV intensity distribution of line type (Typical example) UD40 (Number of blocks: 2, wavelength: 365 nm 0.014 mil, irradiation distance: 30 mm 1.181 in) 1 High UV intensity 1 Long distance irradiation is also possible 1 Improvement in UV intensity uniformity

Product Components



Specifications

Common head specifications

Head part No.	Wavelength: 365 nm 0.014 mil	ANUD4A111	ANUD4A211	ANUD4A311	ANUD4A411	ANUD4A511	ANUD4A611	
Item	Wavelength: 385 nm 0.015 mil	ANUD4B111	ANUD4B211	ANUD4B311	ANUD4B411	ANUD4B511	ANUD4B611	
Number of blo	ocks	1	2	3	4	5	6	
Light source			365 nm ±10 nm 0.0	014 mil ±0.0004 mil /	385 nm ±10 nm 0.0	015 mil ±0.0004 mil		
Peak irradiation intensity	Irradiation distance: 10 mm 0.394 in	2,100 m\	N/cm² (Wavelength:	365 nm 0.014 mil) /	2,500 mW/cm ² (Wa	velength: 385 nm 0	0.015 mil)	
Initial guaranteed value (Note 1)	Irradiation distance: 30 mm 1.181 in	1,100 m\	N/cm² (Wavelength:	365 nm 0.014 mil) /	1,400 mW/cm ² (Wa	velength: 385 nm 0	0.015 mil)	
Peak irradiation intensity	Irradiation distance: 10 mm 0.394 in	4,200 m\	N/cm ² (Wavelength:	365 nm 0.014 mil) /	4,600 mW/cm ² (Wa	velength: 385 nm 0	0.015 mil)	
Typical value (Note 2)	Irradiation distance: 30 mm 1.181 in	2,300 mW/cm² (Wavelength: 365 nm 0.014 mil) / 2,600 mW/cm² (Wavelength: 385 nm 0.015 mil)						
Effective irradiation	Irradiation distance: 10 mm 0.394 in	36 mm 1.417 in	108 mm 4.252 in	180 mm 7.087 in	252 mm 9.921 in	324 mm 12.756 in	396 mm 15.591 in	
width (Note 2)	Irradiation distance: 30 mm 1.181 in	16 mm 0.630 in	88 mm 3.465 in	160 mm 6.299 in	232 mm 9.134 in	304 mm 11.968 in	376 mm 14.803 in	
Estimated hea	ad life expectancy (Note 2)		1	5,000 hours (70 % f	or initial UV intensity	()		
Ambient opera	ating temperature / ating humidity	0	to +35 °C +32 to +9	5 °F / 30 to 85 % RI	H (no dew condensa	ation or icing allowe	d)	
Storage temper	rature / storage humidity	-10 to +60 °C +14 to +140 °F / 30 to 85 % RH (no dew condensation or icing allowed)						
Cooling metho	bd	Fan-forced air cooling						
Outer finishing		Matte black painting						
Accessories				nection cable not su LED, a constant-vo				

Notes: 1) Based on our company's measurement standards. Values are initial guaranteed values, but not representative values.
2) Based on our company's measurement standards. Values are typical, but not guaranteed.

Common controller specifications

	Controller part No.	ANUD4S□				
Item		ANUU45				
Input supply vo	oltage	1ø 200 to 240 V AC				
Input supply fre	equency	50 to 60 Hz				
AC inlet		Terminal block (terminal block screw diameter: ø4 mm ø0.016 in) (Note 1)				
No. of irradiation	on program patterns	32 patterns (Note 2)				
Display, setting	g, operation	Display, setting, operation from the touch screen				
External	Туре	Parallel I/O (D-Sub37 (Note 3))				
External control	External input	LED lighting, program selection, LED block individual lighting, local or remote selection, external emergency				
CONTROL	External output	Equipment power ON, irradiation preparation complete, irradiating, alert, error, main unit emergency stop				
Dimming contro	ol (Note 2)	50 to 100 % (in increments of 1 %)				
LED temperatu	ure feedback	A function that senses the temperature of the LED head section and maintains constant UV intensity				
Ambient operat	ting temperature / ting humidity	0 to +35 °C +32 to +95 °F / 30 to 85 % RH (no dew condensation or icing allowed)				
Storage tempera	ature / storage humidity	-10 to +60 °C +14 to +140 °F / 30 to 85 % RH (no dew condensation or icing allowed)				
Cooling method	d	Control unit: Fan-less natural air cooling, Power unit: Fan-forced air cooling				
Configuration		Separation of control unit equipped with PLC and power supply for LED lighting				
Outer finishing		Matte black painting				
Accessories	Control unit	Power key, D-Sub37 connector				
Accessories	Power unit	Signal cable (1 m 3.281 ft), AC connection cable (1 m 3.281 ft), LED head connection cable (5 m 16.404 ft)				

Notes: 1) Prepare a separate power supply cable (AC supply cable) with a diameter appropriate for the maximum input current.
2) Setting from the touch screen.
3) Prepare a separate cable for connecting to the D-Sub37 connector.

Specifications

Individual specifications

With single head

Number of bloc	ks	1	2	3	4	5	6
	Wavelength: 365 nm 0.014 mil	ANUD4A111	ANUD4A211	ANUD4A311	ANUD4A411	ANUD4A511	ANUD4A611
Head part No.	Wavelength: 385 nm 0.015 mil	ANUD4B111	ANUD4B211	ANUD4B311	ANUD4B411	ANUD4B511	ANUD4B611
Controller part	No.	ANUD4S10	ANUD4S20	ANUD4S30	ANUD4S40	ANUD4S50	ANUD4S60
No. of control u	ınits			•	1		
No. of power un	nits		1			2	
Maximum input	current	1 A	2 A	3 A	4 A	5 A	6 A
Maximum power	er consumption	150 W	250 W	350 W	450 W	550 W	650 W
	Head	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg approx.
Maight (Note)	Control unit			10 kg approx.			
Weight (Note)	Power unit-1	10 kg approx.	12 kg approx.		14 kg a	approx.	
	Power unit-2				10 kg approx.	12 kg approx.	14 kg approx.

Note: Excluding connectors and cables.

With dual head (Combinations of [1 to 6 blocks in Head 1] and [1 to 3 blocks in Head 2])

					Number of bloom	ocks (Head 1)				
			1	2	3	4	5	6		
	Controller part No.		ANUD4S11	ANUD4S21	ANUD4S31	ANUD4S41	ANUD4S51	ANUD4S61		
	No. of contro	ol units				1				
	No. of powe	r units		2			3			
	Maximum in	put current	2 A	3 A	4 A	5 A	6 A	7 A		
	Maximum powe	r consumption	250 W	350 W	450 W	550 W	650 W	750 W		
1		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg appro		
		Head 2		1.3 kg approx.						
	Weight (Note)	Control unit			10 kg a	approx.				
	vveignt (NOIN)	Power unit-1	10 kg approx.	12 kg approx.		14 kg a	approx.			
		Power unit-2				10 kg approx.	12 kg approx.	14 kg approx		
		Power unit-3			10 kg a	approx.				
	Controller part No.		ANUD4S12	ANUD4S22	ANUD4S32	ANUD4S42	ANUD4S52	ANUD4S62		
	No. of control units					1				
	No. of power units			2			3			
	Maximum input current		3 A	4 A	5 A	6 A	7 A	8 A		
	Maximum power consumption		350 W	450 W	550 W	650 W	750 W	850 W		
2		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg appro		
		Head 2	1.8 kg approx.							
	Weight (Note)	Control unit	10 kg approx.							
	vveignt	Power unit-1	10 kg approx. 12 kg approx. 14 kg approx.							
		Power unit-2				10 kg approx.	12 kg approx.	14 kg appro		
		Power unit-3			12 kg a	approx.				
	Controller pa	art No.	ANUD4S13	ANUD4S23	ANUD4S33	ANUD4S43	ANUD4S53	ANUD4S63		
	No. of contro	ol units				1				
	No. of powe	r units		2			3			
	Maximum in	put current	4 A	5 A	6 A	7 A	8 A	9 A		
	Maximum powe	r consumption	450 W	550 W	650 W	750 W	850 W	950 W		
3		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg appro		
		Head 2			2.3 kg	approx.				
	Weight (Note)	Control unit			10 kg a	approx.				
	vveignt (1556)	Power unit-1	10 kg approx.	12 kg approx.		14 kg a	approx.			
		Power unit-2				10 kg approx.	12 kg approx.	14 kg approx		
		Power unit-3			14 kg a	approx.				

Specifications

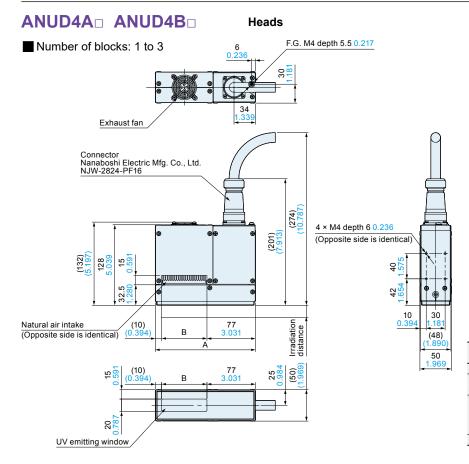
Individual specifications

With dual head (Combinations of [1 to 6 blocks in Head 1] and [4 to 6 blocks in Head 2])

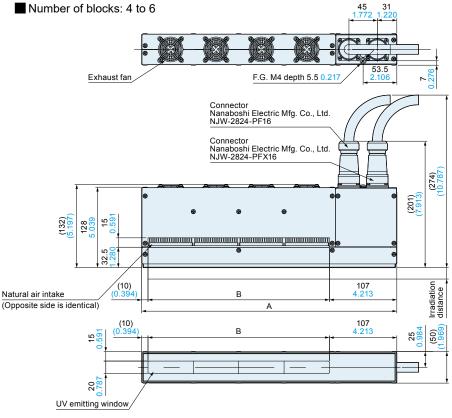
					Number of bl	ocks (Head 1)		
		-	1	2	3	4	5	6
	Controller pa	art No.	ANUD4S14	ANUD4S24	ANUD4S34	ANUD4S44	ANUD4S54	ANUD4S64
	No. of contro	-				1		
	No. of powe	r units	3			4		
	Maximum in	put current	5 A	6 A	7 A	8 A	9 A	10 A
	Maximum powe		550 W	650 W	750 W	850 W	950 W	1,050 W
		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg approx
4		Head 2	0 11	0 11		approx.	0 11	0 11
		Control unit				approx.		
	Weight (Note)	Power unit-1	10 kg approx.	12 kg approx.			approx.	
		Power unit-2	<u> </u>			10 kg approx.	12 kg approx.	14 kg approx
		Power unit-3			14 kg :	approx.		
		Power unit-4			10 kg :	approx.		
	Controller pa	art No.	ANUD4S15	ANUD4S25	ANUD4S35	ANUD4S45	ANUD4S55	ANUD4S65
	No. of control units			1				
	No. of power units			3		4		
	Maximum input current		6 A	7 A	8 A	9 A	10 A	11 A
	Maximum power consumption		650 W	750 W	850 W	950 W	1,050 W	1,150 W
_ ا		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg approx
5		Head 2	3.5 kg approx.					
		Control unit			10 kg a	approx.		
	Weight (Note)	Power unit-1	10 kg approx.	12 kg approx.		14 kg	approx.	
		Power unit-2				10 kg approx.	12 kg approx.	14 kg approx
		Power unit-3			14 kg :	approx.		
		Power unit-4			12 kg :	approx.		
	Controller pa	art No.	ANUD4S16	ANUD4S26	ANUD4S36	ANUD4S46	ANUD4S56	ANUD4S66
	No. of contro	ol units				1		
	No. of powe	r units		3			4	
	Maximum in	put current	7 A	8 A	9 A	10 A	11 A	12 A
	Maximum powe	r consumption	750 W	850 W	950 W	1,050 W	1,150 W	1,250 W
6		Head 1	1.3 kg approx.	1.8 kg approx.	2.3 kg approx.	3.0 kg approx.	3.5 kg approx.	4.0 kg approx
ľ		Head 2			4.0 kg	approx.		
		Control unit			10 kg :	approx.		
	Weight (Note)	Power unit-1	10 kg approx.	12 kg approx.		14 kg	approx.	I
		Power unit-2				10 kg approx.	12 kg approx.	14 kg approx
		Power unit-3			14 kg :	approx.		
		Power unit-4			14 kg :	approx.		

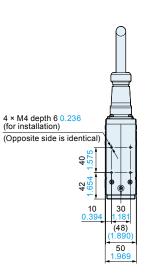
Note: Excluding connectors and cables.

Dimensions (Unit: mm in)



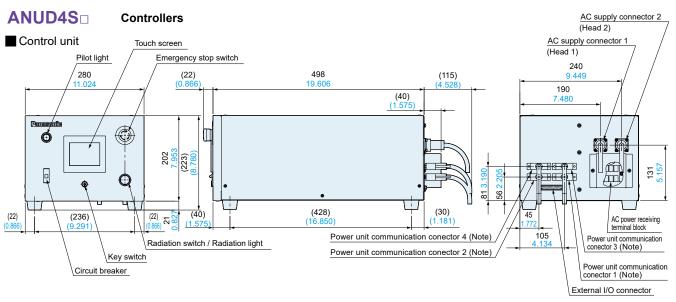
Head	Wavelength: 365 nm 0.014 mil	ANUD4A111	ANUD4A211	ANUD4A311	
Part No.	Wavelength: 385 nm 0.015 mil	ANUD4B111	ANUD4B211	ANUD4B311	
Num	ber of blocks	1	2	3	
Effective irradiation	Irradiation distance: 10 mm 0.394 in	36 1.417	108 4.252	180 7.087	
width	Irradiation distance: 30 mm 1.181 in	16 0.630	88 3.465	160 6.299	
	Width	50 1.969			
External dimensions	Height	(with receptacle	(142 5.591) e, without conne	ctor and cable)	
	A (Length)	159 6.260	231 9.094	303 11.929	
	В	72 2.835	144 5.669	216 8.504	





Head	Wavelength: 365 nm 0.014 mil	ANUD4A411	ANUD4A511	ANUD4A611		
Part No.	Wavelength: 385 nm 0.015 mil	ANUD4B411	ANUD4B511	ANUD4B611		
Num	Number of blocks		5	6		
Effective irradiation	Irradiation distance: 10 mm 0.394 in	252 9.921	324 12.756	396 15.591		
width	Irradiation distance: 30 mm 1.181 in	232 9.134	304 11.968	376 14.803		
	Width		50 1.969			
External	Height	(142 5.591)				
dimensions	ricigit	(with receptacle, without connector and cable)				
	A (Length)	405 15.945	477 18.779	549 21.614		
В		288 11.339	360 14.173	432 17.008		

Dimensions (Unit: mm in)



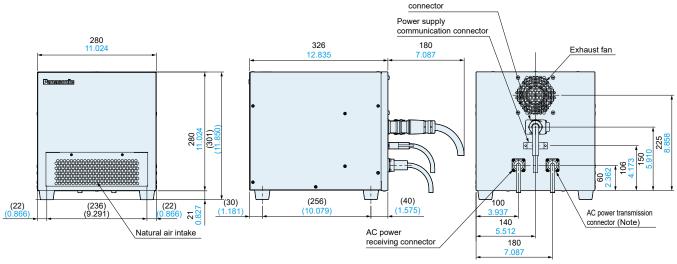
Note: The position and number of power unit communication connectors depend on the number of connected power units. See the chart on the right for the corresponding models. (Figure above shows an example of using 4 power units)

Power unit communication connector availability chart

LED head connection

			Controlle	r part No.		
	ANUD4S10	ANUD4S40	ANUD4S11	ANUD4S14	ANUD4S41	ANUD4S44
	ANUD4S20	ANUD4S50	ANUD4S12	ANUD4S15	ANUD4S42	ANUD4S45
	ANUD4S30	ANUD4S60	ANUD4S13	ANUD4S16	ANUD4S43	ANUD4S46
			ANUD4S21	ANUD4S24	ANUD4S51	ANUD4S54
Power unit comminucation connector			ANUD4S22	ANUD4S25	ANUD4S52	ANUD4S55
connector			ANUD4S23	ANUD4S26	ANUD4S53	ANUD4S56
			ANUD4S31	ANUD4S34	ANUD4S61	ANUD4S64
			ANUD4S32	ANUD4S35	ANUD4S62	ANUD4S65
			ANUD4S33	ANUD4S36	ANUD4S63	ANUD4S66
No. of power units	1	2	2	3	3	4
Power unit comminucation connector 1	Available	Available	Available	Available	Available	Available
Power unit comminucation connector 2	None	Available	None	None	Available	Available
Power unit comminucation connector 3	None	None	Available	Available	Available	Available
Power unit comminucation connector 4	None	None	None	Available	None	Available

Power unit



Note: Whether an AC transmission connector is used depends on the controller model. See the chart on the right for information on which models use AC transmission connectors.

(Figure above shows an example of using an AC transmission connector)

AC nower transmission connector availability chart	. Danier instructional and annihila

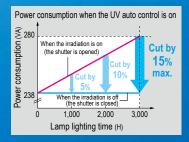
	Controller part No.					
	ANUD4S10	ANUD4S40	ANUD4S11	ANUD4S14	ANUD4S41	ANUD4S44
	ANUD4S20	ANUD4S50	ANUD4S12	ANUD4S15	ANUD4S42	ANUD4S45
	ANUD4S30	ANUD4S60	ANUD4S13	ANUD4S16	ANUD4S43	ANUD4S46
			ANUD4S21	ANUD4S24	ANUD4S51	ANUD4S54
AC transmission connector used / not used			ANUD4S22	ANUD4S25	ANUD4S52	ANUD4S55
useu / Hot useu			ANUD4S23	ANUD4S26	ANUD4S53	ANUD4S56
			ANUD4S31	ANUD4S34	ANUD4S61	ANUD4S64
			ANUD4S32	ANUD4S35	ANUD4S62	ANUD4S65
			ANUD4S33	ANUD4S36	ANUD4S63	ANUD4S66
No. of power units	1	2	2	3	3	4
Power unit-1	None	Available	None	None	Available	Available
Power unit-2	_	None	_		None	None
Power unit-3	_		None	Available	None	Available
Power unit-4	_		_	None	_	None

Energy-efficient mode will cut power consumption by maximum of 15 % when the irradiation is off. Also featuring high-accuracy auto-tuning function

High-efficiency UV irradiation

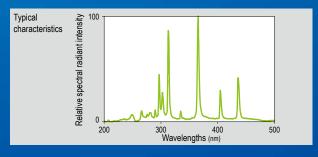
Eco mode reduces power consumption.

The Eco mode cuts the standby power consumption by a maximum of 15 % while the irradiation is off (the shutter is closed), contributing to the running costs (electricity charge). Compatible with a wide range of power supply voltages from 100 to 240 V AC for worldwide use.



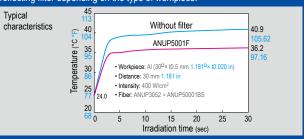
Surface tackiness can be quickly eliminated.

The development and adoption of our unique special mirror that allows for the effective irradiation with short wavelengths enables the quick elimination of surface stickiness caused during curing. The irradiation time can also be reduced, decreasing the temperature rise of workpieces.



ANUP5001F heat ray cut filter prevents temperature rises in the irradiation unit.

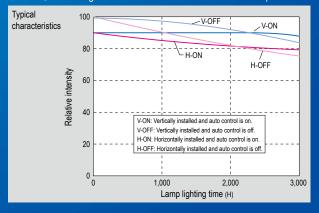
The use of the filter is recommended especially for heat-sensitive workpieces. You can reduce temperature rises in the irradiation unit by attaching a heat reflecting filter depending on the type of workpiece.



Stable UV irradiation performance

UV auto control function automatically compensates for the UV intensity

This function increases the electrical power applied to the lamp according to the total irradiation time of the lamp to compensate for the UV intensity decrease, maintaining stable UV irradiation until the end of the lamp life.



Significantly higher reliability for bonding and fixing

Panasonic's original

UP50

Slim UV sensor

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



The UV intensity can be relative measured (Note 1) at the actual position by using the slim UV sensor. It can also automatically adjust the UV intensity to the preset level. Since the sensor only has 5 mm (0.197 in) 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 UV intensity can be checked and adjusted at real time, enhancing the bonding and fixing reliability.

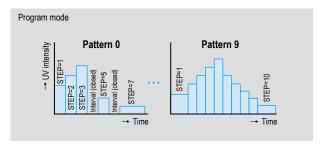
Notes: 1) UV intensity can be measured as a relative value.

2) Because sénsitivity adjustment of the UV sensor is carried out at 365 nm single wavelength, depending on the spectral sensitivity characteristics of the UV resin being used, it may not be possible to fully control the curing process. For more information, please consult us.

Stable UV irradiation performance

Programmable irradiation function

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 appication, 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 10 steps 10 patterns can be set. This includes the step-up mode which the intensity is changed over time and the interval mode which irradiation is performed at specified intervals.

Digital setting allows for consistency of set values from operator to operator.

The irradiation power can be finely set in the range of 0 to 100 % in increments of 0.5 %. The actual UV irradiation intensity is approximately proportional to the displayed value, making the setting work easier and more accurate.

Interchangeability with ANUP5204

The wavelength distribution (typical characteristics) of **UP50** is identical to **ANUP5204**, our existing model. The replacement lamp, the **ANUPS204**, is also the same as that for the **ANUP5204**.

Specifications

Part No.		ANUP50		
Power su	ipply	90 to 264 V AC 50 / 60 Hz 280 VA		
Lamp Part No.		ANUPS204		
		200 W mercury xenon lamp, preset quickly-attachable type		
Lamp		Notes: 1) Average life of 3,000 hours: Ratio to the initial UV intensity 80% or higher in a vertical position, 70 % or higher in a horizontal position (when the auto control function is off)		
		2) Guaranteed life: 2,000 hours		
Ambient temperature / ambient humidity +10		+10 to +40 °C +50 to +104 °F / Max. 80 % RH (no condensation)		
Accessories		Lamp (ANUPS204) Power cord (3 m 9.843 ft, 100 V AC compatible, plug with 2-pole ground)		

Easy to install

Can be placed either vertically or horizontally.

The unit can be placed in either a vertical position that makes the footprint smaller or a horizontal position that allows stacking other units.



Long life, quickly-attachable lamp

The average lamp life is 3,000 hours (guaranteed life: 2,000 hours (Note)). The lamp can be easily replaced with a single operation and does not require an optical axis adjustment.

Note: Ratio to the initial UV intensity -- 80 % or higher in vertical placement, 70 % or higher in horizontal placement



Two lens unit models for short and long range converging

The two lens unit models, one for short range and the other for long range converging, cover a variety of applications and workpieces.



Note: Please refer to pages 22 and 23 for the UV intensity distribution data.

omprodoc.	
AS lens	BS lens
Short range converging lens	Long range converging lens

		UV intensity adjustment by digital setting (0 to 100 %, in increments of 0.5 %)	
		UV auto control	
UV irradiation		Programmable irradiation (10 steps in each of 10 patterns)	
		External signal control: Turning the lamp on/off, manual opening/closing of the shutter, starting programmed pattern irradiation, starting timer-controlled irradiation, and executing calibration	
Shutter		Electronically-controlled shutter using manual or timer-controlled operation	
Setting		Digital setting using membrane switches	
	Input	Opening/closing the shutter (timer/manual), lighting the lamp	
External signal Output		Lighting the lamp, stabilizing the lamp light, opening the shutter, outputting error signals, and indicating the lamp life	
Dimensions		165 × 201 × 325 mm 6.496 × 7.913 × 12.795 in (Excluding protruding sections)	
Weight		8 kg approx.	

Note: Please refer to page 22 for the light guide fiber units and other optional parts.

Options

Light guide fiber units

Number of branches	1	2	3	4
Shape				
Bundle diameter: ø3.5 mm ø0.138 in (light outlet end)	ANUP5031	ANUP5032	ANUP5033	ANUP5034
Bundle diameter: ø5 mm ø0.197 in (light outlet end)	ANUP5051	ANUP5052	ANUP5053	ANUP5054
Bundle diameter: ø8 mm ø0.315 in (light outlet end)	ANUP5081			

Note: The custom-made correspondence with the line type light outlet shape is also possible. For more information, please consult us.

Others

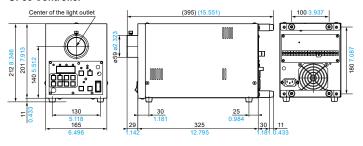
Product name	Specifications	Part No.
	Short range converging lens	ANUP5001AS
Lens (Note)	Long range converging lens	ANUP5001BS
	Cylindrical lens	Custom-made product
Heat ray cut filter	Reflection type	ANUP5001F
Lamp	For UP50	ANUPS204
Lamp lead wire	For UP50	ANUPS50H2
UV sensor	Slim type (Thickness: 5 mm 0.197 in) (ANUJ38102 is attached.)	ANUJ3800
	Length: 10 m 32.808 ft	ANUJ38110
UV sensor extension cable	Length: 2 m 6.562 ft (Equivalent to the cable attached with ANUJ3800)	ANUJ38102

Note: Please consult us separately for the lens for the Ø8 mm \emptyset 0.315 in fiber unit.

Dimensions (Unit: mm in) Excluding the protruding sections

UP50

UP50 Controller



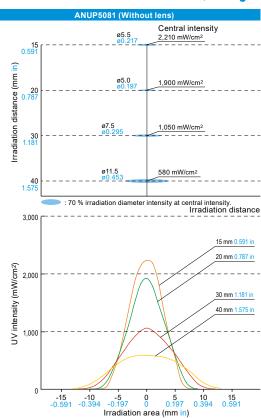
1,000 Core material: Quartz Clad material: Quartz wable bending radius: 50 mm 1.969 in, ANUP5081; Minimum allowable bending radius: 80 mm

Light guide fiber units

Heat ray cut filter unit

Intensity Profiles (Typical examples)

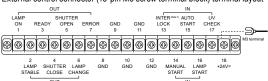
Bundle diameter: ø8 mm ø0.315 in, Straight



[Rough guide of the relationship between the number of fiber unit branches and the UV intensity ratio] (Irradiation distance: 15 mm 0.591 in, \varnothing 1 mm \varnothing 0.039 in sensor)

Fiber unit	UV intensity ratio			
Fiber unit	Without lens	With lens		
ø5 × 1 branch	100 %	100 %		
ø5 × 2 branches	75 %	65 %		
ø5 × 3 branches	55 %	53 %		
ø5 × 4 branches	50 %	45 %		
ø3.5 × 1 branch	100 %	100 %		
ø3.5 × 2 branches	80 %	75 %		
ø3.5 × 3 branches	62 %	60 %		
ø3.5 × 4 branches	57 %	50 %		

External control connector (18-pin M3 screw terminal block) terminal layout



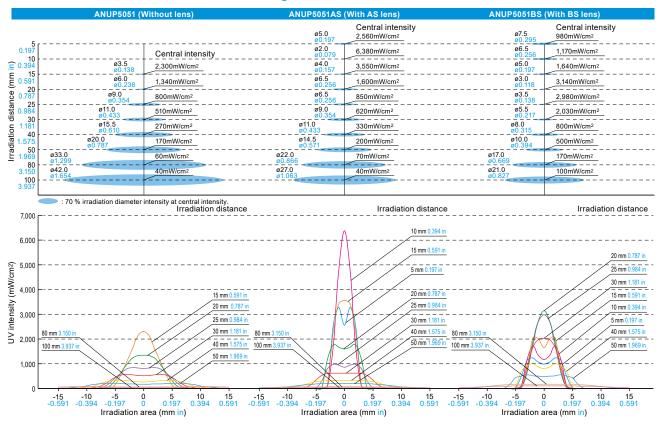
Note: At shipment, for B-contact (allows irradiation when ON), No.13 (INTERLOCK) is connected to No.12 (GND) by a short-circuit line.

Lens unit

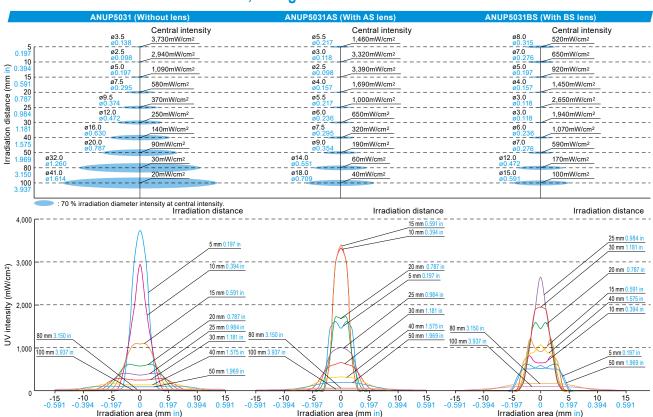
Light outi	light outlet end shape						
	Fiber bundle diameter:	Fiber bundle diameter:	Fiber bundle diameter:				
	ø5 mm ø0.197 in	ø3.5 mm ø0.138 in	ø8 mm ø0.315 in				
Without	30 1.181 10 0.394 00.197 07 00.394 00.551 00 0.276	25 0.984 10 0.394 0.315 0.315 0.354 0.315 0.354 0.315 0.354	22 0.866 18 0.709 22 0.866 0.818 0.709 0.830 0.830 0.709 00.39				
For AS	30 41	25 41					
with lens	1.181 1.614	0.984 1.614					
and BS	0.00 014 014	28 89 914					
lens	00.394 00.551 00.551	0.315 00.354 00.551					

Intensity Profiles (Typical examples)

Bundle diameter: ø5 mm ø0.197 in, Straight



Bundle diameter: ø3.5 mm ø0.138 in, Straight



The DICOOL optical mirror,

Metal halide lamp, and

UV auto control function

supports customer needs.

Ideal for UV irradiation of a variety of workpieces.



The tube types are order made to customer specifications. For more information, please consult us.

High efficiency and high intensity

Functions for this unit has been developed based on lighting and control technologies accumulated over years, including a unique Panasonic light distribution technology (efficient irradiation) and DICOOL optical mirror, which prevents the rise of workpiece temperature. The efficient light distribution allows for high irradiation intensity, significantly enhancing productivity.

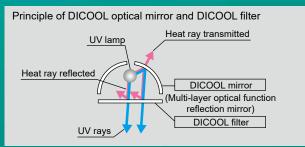
UV auto control function for automatic compensation

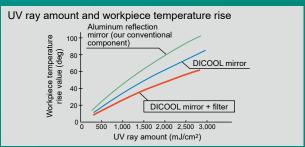
Our unique UV auto control function automatically compensates for decrease in the irradiation power due to lamp deterioration over time, maintaining a stable UV irradiation until the end of the lamp life.

*For 3 kW and 6 kW models

DICOOL optical mirror (reflection mirror) adopted to prevent temperature rise

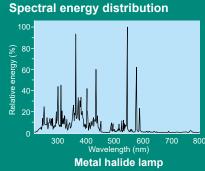
Our original DICOOL optical mirror which reflects UV rays only has been adopted. The DICOOL filter which transmits UV rays only can also be installed as an option. These components decrease radiant heat from the lamp and reflection mirror, reducing the workpiece temperature rise by about 40 %. This feature allows for a wider application to heat-sensitive materials. Also it is equipped with a safety system that stops UV irradiation in case of an excessive temperature rise inside the lamp housing.

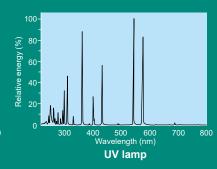




Metal halide lamp developed to significantly increase the thick film curing speed

The metal halide lamp has high luminous efficiency at a wavelength range from 300 to 400 nm, which is about 20 % higher than the efficiency of the conventional UV lamp. This lamp is ideal for bonding, printing, marking, etc. of materials containing a color and materials that require thick film application. Also, the lamp type can be selected according to the type of UV-curable resin or coating film thickness, etc.





Lamp lineup to cover the resin types and applications

The metal halide lamp is suited for thick-film sealing, coating, bonding, and other general purposes. The UV lamp is suited for applications that require higher surface-curing performance.

A lamp with the best irradiation width can be chosen depending on workpiece size.

Area with 75 % peak intensity is defined as effective irradiation width. The standard effective irradiation width along the lamp width is 50 mm 1.969 in, and the effective irradiation width along the lamp length is as shown in the table below.

Areas outside the effective irradiation width are also irradiated with UV rays; however, the irradiation intensity in these areas are lower.

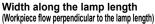
Irradiation width and lamp output intensity

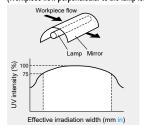
Effective irradiation width (mm in)		Lamp output				
	Along the Along the		Lamp output intensity			Lamp emission length (mm in)
	lamp width	lamp length	80 W/cm	120 W/cm 160 W/		lengar (mm m)
	50 1.969	100 3.937		1.5 kW	l	125 4.921
	50 1.969	150 5.906			3 kW	180 7.087
	50 1.969	200 7.874		3 kW		250 9.843
	50 1.969	300 11.811	3 kW		6 kW	375 14.764
	50 1.969	400 15.748		6 kW		500 19.685
	50 1.969	650 25.591	6 kW			750 29.528

Note: The irradiation distance is 130 mm 5.118 in (DICOOL optical mirror).

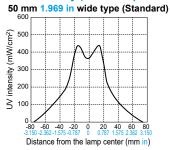
Width along the lamp width (Workpiece flow along the lamp length)







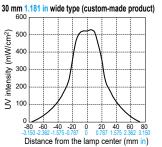
Irradiation intensity (in the lamp width direction)



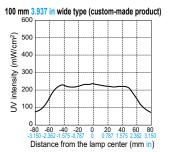
■Lamp: Metal halide lamp (1.5 kW)

Reflector: DICOOL optical mirror

The 30 mm 1.181 in wide and 100 mm 3.937 in wide types are also available.



■Lamp: Metal halide lamp (1.5 kW) Reflector: DICOOL optical mirror Distance: 130 mm 5.118 in



■Lamp: Metal halide lamp (1.5 kW) Reflector: DICOOL optical mirror Distance: 130 mm 5.118 in

Note: The standard type is designed to uniformly irradiate the area of the 50 mm 1.969 in effective irradiation width

Power supply unit

Distance: 130 mm 5.118 in

Function list

Capacity (kW)	Ballast type	UV intensity control function
6	Electronic ballast type	Continuous intensity control function
3	(with a UV auto control function)	50 to 100 % range (in 5 % increments)
1.5	Transformer type	With a switch for dimming the intensity to 75 %







Electronic ballast type has a smaller size and 40 % lower energy consumption

Compared with the conventional model (6 kW), the size and weight has been significantly reduced to approx. 2/3 to 1/3. The power supply capacity has been cut by approx. 40 %, achieving significant energy conservation.

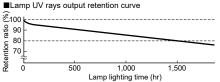
Replacement lamps

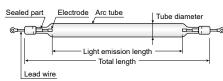
When replacing a lamp, without fail, use one with the same lamp power and same dimensions as the one being replaced. Metal halide lamps and UV lamps of the same lamp power and same dimensions can be used to provide lighting in the same unit.

- UV-curing lamp types include a UV lamp suited for surface curing and a metal halide lamp ideal
- for thick-film sealing, coating, and bonding.

 You can choose from a wide selection of lamps to
- find the optimum type for the application.

 The average lamp life is 1,500 hours. Replace the lamp when the total lighting time reaches about 1,500 hours. (The guaranteed life is 1,000 hours.)





Lamp type		Part No.	Lamp power (kW)	Total length (mm in)	Emission length (mm in)	Tube diameter (mm in)	Effective irradiation width (mm in)	
							Along the lamp length	Along the lamp width
lamp	80 W/cm type	ANUM10081	1.0	215 8.465	125 4.921	24 0.945	100 3.937	Depends on the irradiation unit
		ANUM30081	3.0	475 18.701	375 14.764	24 0.945	300 11.811	
		ANUM60081	6.0	850 33.465	750 29.528	24 0.945	650 25.591	
halide	120 W/cm type	ANUM15021	1.5	215 8.465	125 4.921	24 0.945	100 3.937	
Б		ANUM30021	3.0	350 13.780	250 9.843	24 0.945	200 7.874	
Metal		ANUM60021	6.0	600 23.622	500 19.685	24 0.945	400 15.748	
ž	160 W/cm type	ANUM30061	3.0	280 11.024	180 7.087	24 0.945	150 5.906	
		ANUM60061	6.0	475 18.701	375 14.764	24 0.945	300 11.811	
	80 W/cm type	ANUPL10081	1.0	215 8.465	125 4.921	24 0.945	100 3.937	
		ANUPL20081	2.0	350 13.780	250 9.843	24 0.945	200 7.874	
		ANUPL30081	3.0	475 18.701	375 14.764	24 0.945	300 11.811	
lamp		ANUPL60081	6.0	850 33.465	750 29.528	24 0.945	650 25.591	
UV lar	120 W/cm type	ANUPL15021	1.5	215 8.465	125 4.921	24 0.945	100 3.937	Depends on the irradiation unit
		ANUPL30021	3.0	350 13.780	250 9.843	24 0.945	200 7.874	
		ANUPL60021	6.0	600 23.622	500 19.685	24 0.945	400 15.748	
	160 W/cm type	ANUPL30061	3.0	280 11.024	180 7.087	24 0.945	150 5.906	
		ANUPL60061	6.0	475 18.701	375 14.764	24 0.945	300 11.811	

Note: The effective irradiation width refers to the irradiation width when the light intensity is approx. 75 % of the peak intensity. The standard effective irradiation width along the lamp width is 50 mm 1.969 in. Areas outside the effective irradiation width are also irradiated with UV rays; however, the irradiation intensity in such areas is lower, taking longer to complete the curing process.

- The arc tube is heated (+700 to +800 °C +1,292 to +1,472 °F) during the lamp lighting. If the arc tube makes contact with a foreign substance or the user's bare hands, the dirt can cause the tube to lose its clarity, decreasing the lamp efficiency. When setting up the lamp, wipe the lamp with alcohol.
 Lighting the lamp alone will overheat and shorten the lamp life. Make sure to use a UV irradiation unit designed by our company and cool the lamp.

ANUP8000 Series

Wide selection of 1.5 kW, 3 kW, and 6 kW type helps select best option for your production equipment.

- •The 3 kW and 6 kW types adopt an electronic ballast (with a UV auto control function). The 1.5 kW types adopt a transformer system.
- •The lamp housing and the power supply unit can be easily connected by metal connectors.
- •The lamp switch automatically runs and stops the lamp cooling fan by timer control.
- •The system has a lamp voltmeter and an hour meter.

Power supply unit specifications

ı	Lamp output	1.5 kW	3 kW	6 kW	
Ballast type		Transformer	Electronic ballast		
Input power supply		Single phase	Single phase	Three phase	
		200 V AC 50 / 60 Hz (Toggle switch selectable) 15 A	200 / 220 / 240V AC 50 / 60Hz 30A 200V AC 50 / 6		
	Metal halide lamp	1.5 kW	0.114	6 kW	
Lamp	UV lamp	1.5 KVV	3 kW		
External output signals (Monitor function)		Shutter open/close confirmation (available in the type with the shutter function) and temperature thermal normal	Detection of lamp-on, lamp stabilized, errors and cooling fan operation (6 kW type only)		
External input signals (Remote control function)		Shutter open / close (available in the type with the shutter function)	Lamp-ON / OFF, lamp output switching, interlock and shutter open / close (available in the type with the shutter function)		
Error monitor displays		Lamp housing temperature errors and lamp cooling fan errors	Lamp errors, lamp error output power supply unit errors, lamp housing temperature errors, lamp cooling fan errors and interlock		
Lamp in	tensity control	With a switch for dimming the intensity to 75 %	Adjustable range: 100 to 50 %		
Auto control function (UV intensity retention function)		_	Equipped, adjustable range:100 to 50 %	Equipped, adjustable range:100 to 65 %	
Power supply unit size (mm in)		L: 450 × W: 310 × H: 175 L: 17.717 × W: 12.205 × H: 6.890	L: 340 × W: 450 × H: 247 L: 13.386 × W: 17.717 × H: 9.724	L: 270 × W: 685 × H: 475 L: 10.630 × W: 26.968 × H: 18.701	
Weight		32 kg approx.	28 kg approx.	45 kg approx.	



Main base part number specifications

Part No.	Part No. Lamp output		Effective irradiation width (width along the lamp width)	
ANUP8154	1.5 kW	120 W/cm	100 mm 3.937 in	
ANUP8304E	3 kW	80 W/cm	300 mm 11.811 in	
ANUP8308E	3 kW	120 W/cm	200 mm 7.874 in	
ANUP8368E	3 kW	160 W/cm	150 mm 5.906 in	
ANUP8604DE	6 kW	80 W/cm	650 mm 25.591 in	
ANUP8608DE	6 kW	120 W/cm	400 mm 15.748 in	
ANUP8668DE	6 kW	160 W/cm	300 mm 11.811 in	



Fan (for 6 kW)

- Notes: 1) Lamp type: Metal halide lamp 2) For UV lamp type, shutter, DICOOL filter, aluminum reflector type and other specifications, please consult us.
 - 3) Except for some part numbers, ANUP8000 series products are delivered according to customer specifications. The part number will be presented when a quotation is issued.
 - 4) All tube type products are order made to customer specifications. The part number will be presented when a quotation is issued.

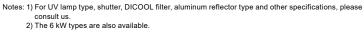
ANUP8000 Series (Standard type)

Tube type standard model Easy to install and set up.

Specifications (ANUP8308E)

(Metal halide lamp: 3 kW 120 W/cm type, base part number)

Power supply	Single phase 200 V (50 / 60 Hz), 30 A		
UV lamp	3 kW x 1 lamp (Metal halide lamp)		
Effective irradiation width (width along the lamp width)	200 mm 7.874 in		
System size (mm in)	L: 548 × W: 212 × H: 383 L: 21.575 × W: 8.346 × H: 15.079 (Lamp housing)		
Oystem size (IIIII III)	L: 340 × W: 450 × H: 247 L: 13.386 × W: 17.717 × H: 9.724 (Power supply unit)		
System weight	Lamp housing: 15 kg approx., Power supply unit: 28 kg approx.		







Lamp housing

Power supply unit

ANUP3000 Series (Bench top type)

The power supply unit is separate, and the system can be placed on the same rack as other peripheral equipment, allowing for easy setup of the system

The tube type products are order made to customer specifications. For more information about the conveyor unit or other details, please consult us.



Note: Conveyor unit varies in appearance according to the lamp specification.

rower supply utili

ANUP7000 Series (Standalone type)

General-purpose type that supports a wide variety of workpieces, including electronic components and PC boards

Specifications (ANUP7328E) (Metal halide lamp: 3 kW 120 W/cm type, base part number)

Power supply	Single phase 200 V (50 / 60 Hz), 30 A		
UV lamp	3 kW × 1 lamp (Metal halide lamp, 120 W/cm)		
Conveyor speed	0.5 to 5 m/min.		
Conveyor belt	Stainless steel mesh belt		
Conveyable workpiece size	W: 300 × H: 100 mm W: 11.811 × H: 3.937 in		
Conveyor height	750 ±25 mm 29.528 ±0.984 in		
Effective irradiation width	200 mm 7.874 in		
System size	L: 1,200 × W: 536 × H: 1,156 mm L: 47.244 × W: 21.102 × H: 45.512 in		
System weight	110 kg approx.		

Note: For UV lamp type, conveyor size, shutter, DICOOL filter, heat-resistant resin belt, aluminum reflector type and other specifications, please consult us.

- The intensity can be adjusted to a range from 50 to 100 % in increments of 5 %.
- Ideal for workpieces of 300 mm 11.811 in or less in width and an irradiation width of 200 mm 7.874 in or less.
- The lamp height can be easily adjusted according to the workpiece height.
- The lightweight compact design facilitates in-line installation with other equipment.



Standalone type

Customization options

We can also offer products using 1.5 kW, 3 kW and 6 kW type power supply units and lamps according to your requirements of the irradiation area and energy. In addition, the following specification options are also available. Please consult us for details.

- 1. Changing the belt to a heat-resistant resin belt
- 2. Changing the belt conveyor width and/or length
- 3. With shutter type
- 4. Change to irradiation width 30mm or 100 mm 1.181 in or 3.937 in
- 5. Decreasing the irradiation unit temperature (Adding a DICOOL filter)
- 6. Change to aluminum reflector
- 7. Adding a conveyor speed display
- 8. Making a conveyor-equipped type based on ANUP8000 Series
- The irradiation unit position can be customized to be, for example, perpendicular or parallel with respect to the workpiece flow direction if necessary.

UV irradiation intensity of 10,000 mW/cm² class at irradiation distance 30 mm 1.181 in. High power output LED Line Type UV curing system

1,050 mm type head production sample (L: 1,225 × W: 210 × H: 110 mm L: 48.228 × W: 8.268 × H: 4.331 in) Excl. wiring connections and protruding sections



Specifications

Effective irradiation width	Min. 70 to 1,800 mm 2.756 to 70.866 in (* For more detailed specifications, please consult us.)		
UV irradiation intensity	9,600 mW/cm² can be supplied (at surface 30 mm 1.181 in below the irradiation section)		
Irradiation distance	30 mm 1.181 in, 80 mm 3.150 in (types with standard mounts for printing machines) *For different specifications, please consult us.		
UV wavelength (Central wavelength)	385 nm, 365 nm		
Estimated light source life	15, 000 hours approx. (* The value is not a guaranteed value.)		
Controller size	L: 500 × W: 300 × H: 710 mm L: 19.685 × W: 11.811 × H: 27.953 in (Depending on the irradiation specification, more than two units will be required.)		
UV irradiation unit cooling system	Forced water cooling system (please make your own arrangements for chillers, etc.) * Clear water (or tap water) cooling can also be used.		



Power supply and controller unit (L: 500 × W: 300 × H: 710 mm L: 19.685 × W: 11.811 × H: 27.953 in)

Excl. wiring connections and protruding sections

Please contact:

Panasonic Industrial Devices SUNX Co., Ltd.

2431-1 Ushiyama-cho, Kasugai-shi, Aichi, 486-0901, Japan Global Sales Department

■Telephone: +81-568-33-7861 ■Facsimile: +81-568-33-8591 panasonic.net/id/pidsx/global



All Rights Reserved © Panasonic Industrial Devices SUNX Co., Ltd. 2016