Panasonic
ideas for life

UV Curing System **Aicure**

LED spot type

ANUJ5010

Expert UV Curing

High output comparable to the lamp type
Next generation energy-efficient UV curing system that achieves high accuracy at low temperature

- Most powerful in its class: 1,400 mW/cm²*
- Ideal wavelength for UV curing: 365 nm
- Smallest in its class: ϕ12 mm dia. x 52 mm long head
- LED life: 10,000 hours (estimated)
- Precision UV curing with minimum thermal distortion
- No. 1 energy efficiency
- Space saving

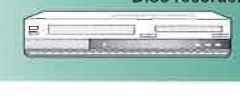
Problems with precision bonding?

Problems caused by thermal distortion?

Problems with running costs?

Problems with installation?

Cutting-edge applications

Bonding of lenses and prisms for Blu-ray Disc recorders, DVD-HD recorders, etc.




Assembly of lens units and filters for mobile phones, digital cameras, etc.

Bonding of lenses and prisms for optical switches, relays, etc.

Bonding of optical fiber ferrules

http://www.naismv.com

* When 100% of the initial intensity is output at an ambient temperature of 25°C

Aicure UV Curing System
AACT1A55E '05. 3

New

Panasonic... the new name for **NAiS**

Matsushita Electric Works, Machine & Vision, Ltd.

We provide you solutions through our expertise in UV curing and control and lighting technologies.

— High output comparable to the lamp type —

We were able to commercialize this LED-type Aicure system by researching manufacturing processes that use UV curing and by focusing on problems common to users. We developed and implemented cutting-edge technology solutions based on process requirements.

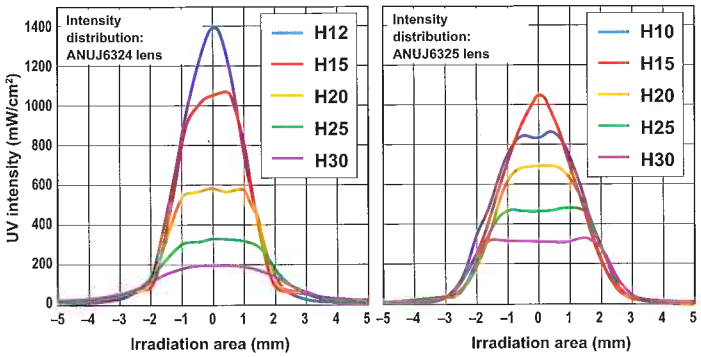
UV irradiation with cutting-edge technologies

■ High irradiation power: 1,400 mW/cm²*

Top in its class

The high output (1,400 mW/cm² or greater) is comparable to the lamp type and reduces the irradiation time (cycle time). Unlike conventional types, the output does not decrease with a number of fiber unit branches. The UV intensity stabilization function keeps the irradiation intensity constant even if the ambient temperature or the head temperature fluctuates, improving the UV curing quality.
The lens unit is capable of different intensity distribution types: One that provides the highest peak output in its class and another that provides high output across a 4-mm diameter area.

* When 100% of the initial intensity is output at an ambient temperature of 25°C

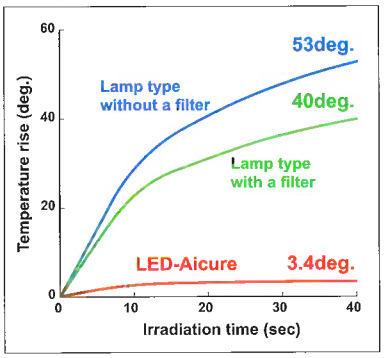


■ Ideal wavelength: 365 nm

UV resin transforms a monomer to a polymer by a photopolymerization reaction (reaction starting wavelength = 365 nm), curing itself and allowing adhesion to occur. ANUJ5010 supports this wavelength, allowing you to use your existing UV meter as is.

■ Minimized temperature rise and thermal distortion: Ideal for precision bonding

The 365 nm wavelength enables clear UV irradiation. The irradiation beam does not contain infrared rays, minimizing the temperature rise of workpieces. This is ideal for applications that require low temperature, 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

■ User-friendly head design

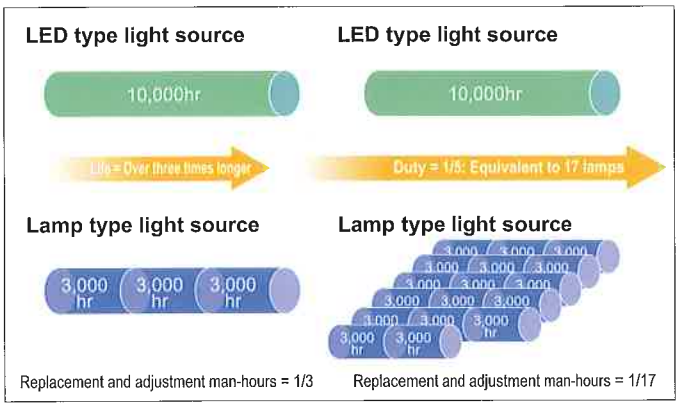
Smallest in its class

The head is the smallest in its class (12 mm dia. x 52 mm long) and easy to attach. It is highly compatible with the conventional fiber type. The slits in the head also serve as a head installation guide. If the top of the head is stained with fumes, the lens unit alone can be replaced, reducing maintenance costs.

Cost reduction through cutting-edge technologies

■ The long 10,000-hour* LED life reduces running costs

The LED life is over three times greater than a conventional UV-lamp. The UV-lamp has to remain lit while the irradiation is controlled by the opening/closing of the shutter. The LED can be instantly turned on/off, thereby allowing it to be shut down when irradiation is not required.
As a result, the lamp life has been substantially increased, leading to a significant reduction in replacement labor and running costs, which has been an issue.



* The 10,000-hour LED life is an estimate based on use of the head at 25°C and a UV intensity over 70% the initial value.

■ Stable irradiation with low power consumption

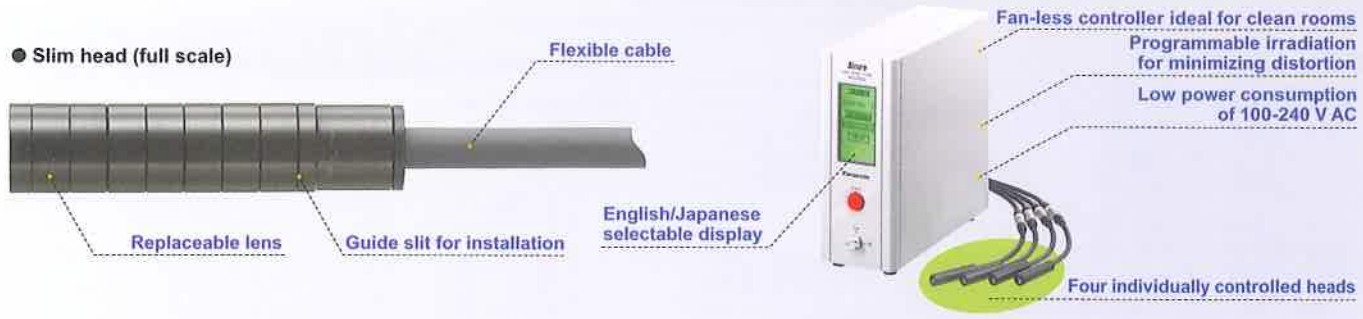
Top in its class

Even when all four heads are turned on, the power consumption is 70 VA or less, enabling both energy conservation and running cost reduction. Furthermore, the light source is digitally controlled and supports 100 to 240 V AC, ensuring reliability even in areas where the power supply is unstable. Even if a power failure occurs, instant recovery is possible without equipment damage.
Since there is no cooling fan, you can turn off the power immediately after use.

■ Fan-less controller doing away with the need for an exhaust process

First in its class

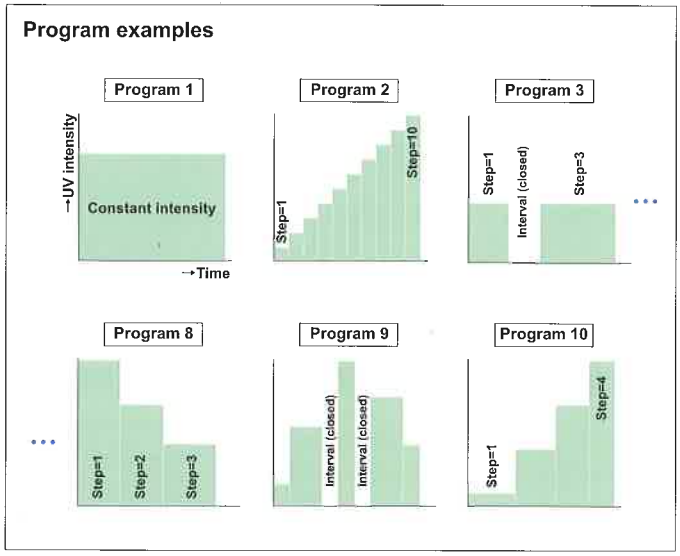
The high power-factor control eliminated the need for a cooling fan and exhaust process, which has previously been a concern during use in a clean room for precision bonding.
The elimination of the time required for cooling improves the productivity.
In addition, the elimination of a fan motor cut the replacement labor and cost.



UV curing quality improvement through cutting-edge technologies

Programmable irradiation further reduces curing distortion.

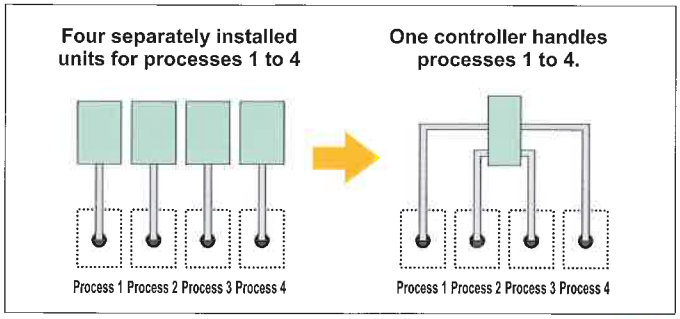
ANUJ5010 is also equipped with the irradiation pattern programming function, which reduces distortion during resin curing. Along with a reduction in thermal distortion, this function is ideal for applications that require high quality, high precision bonding at low temperature.



The irradiation pattern programming function allows changes in the irradiation intensity in accordance with the irradiation time.
Example: Set the UV intensity so that it remains low during the initial stage to minimize distortion and then increases as curing progresses (time) during one irradiation cycle. This allows both a cycle time reduction and supply of the irradiation energy required for curing.

The four individually controlled heads reduce the initial cost.

Ten different irradiation intensities/patterns can be selected externally.
Flexible irradiation is possible with heads controlled individually, all together, or in combination.
One controller can individually control the different timing, intensity, and time settings of up to four heads. Therefore, one ANUJ5010 can do the work of four conventional units, reducing the initial investment.



English/Japanese selectable interactive LCD

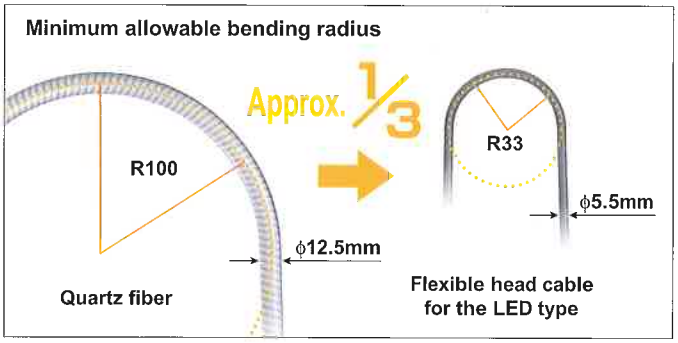
First in its class

The interactive graphical panel with two colors facilitates setting operations and status monitoring of each connected head.
In addition, the display is available in English and Japanese. Please contact us for Chinese and Korean, which are also available.

Significantly improved workability

Flexible cables for smooth head handling

Flexible cables are adopted as standard to cope with frequent head movements.
The minimum allowable bending radius is less than one third the conventional quartz fiber, allowing smooth head handling at your work site.
(Flexibility: Can be bent 10 million times or more)



Over 60%*1 smaller installation space for a wider operation area

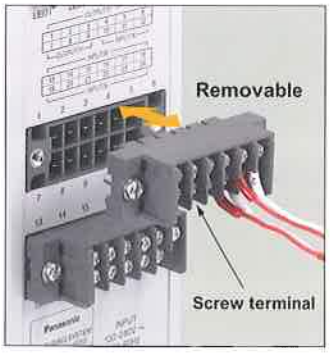
The controller width is only 85 mm, and the installation foot space is over 60%*1 smaller than our conventional model.
Compared to quartz fiber, the head cables require approximately 88%*2 less space to bend. The connection cables are placed at the rear of the controller to provide a neatly organized workspace, which improves workability and enables high-density installation of equipment.

*1: Compared with our horizontally-installed conventional model ANUP5204.
*2: Since the bending radius is one third, the area ratio is 1/9 (= 1/3 x 1/3).

The removable screw terminal facilitates connection work.

First in its class

External equipment can be connected to the M3 screw-terminal block, which is backward-compatible and supports Y- and ring-type crimp terminals.
The removable terminal block has significantly improved the workability.



Reliable monitoring functions

Each head has a self-diagnosis function for detecting problems, such as temperature rise, disconnection, and overcurrent. In addition, the I/O circuit for external equipment has a short-circuit protection circuit, which minimizes damage to the unit by means such as stopping internal power supply.

First in its class Top in its class Smallest in its class No. 1 energy efficiency class

According to our research as of December 2004

LED SPOT Type UV Curing System Aicure ANUJ5010

Specifications

Controller	Model		ANUJ5010	
	Power supply		100-240 V AC (±10%) 50/60Hz (70 VA at 100VAC)	
Head	Irradiation intensity *1		1,400 mW/cm²	1,050 mW/cm²
	Part No.	With lens cable	ANUJ61324C	ANUJ61325C
		With lens	ANUJ61324	ANUJ61325
		Head only	ANUJ6130	
	Irradiation wavelength		365 nm ±5 nm Class-3B LED type	
	Estimated LED life *2		10,000 hours	
Controller functions	Connectable heads		Four heads max (Collectively/Individually controllable)	
	UV irradiation		Programmable irradiation patterns (10 steps in each of 10 patterns) Collective/Individual control of the heads	
	Pattern switching		Stores 10 patterns, selectable by external signals	
	Intensity/ irradiation control		Digital intensity/irradiation control Manual or timer control (0.1 to 999 sec)	
	Setting/Operation		Setting by touch switches on the interactive two-color LCD (English/Japanese selectable) Power key switch	
	External input		Individual irradiation/stop input, interlock, full-irradiation input, and pattern switching	
	External output		READY signal, error signal, alarm output, BUSY output (each head separately)	
	Operating temperature/ humidity		Controller: 0 to 40°C, 85% max (No condensation)	
			Head: 5 to 35°C, 85% max (No condensation)	
	Storage temperature/ humidity		Controller: -10 to 60°C, 85% max (No condensation)	
			Head: -10 to 60°C, 85% max (No condensation)	

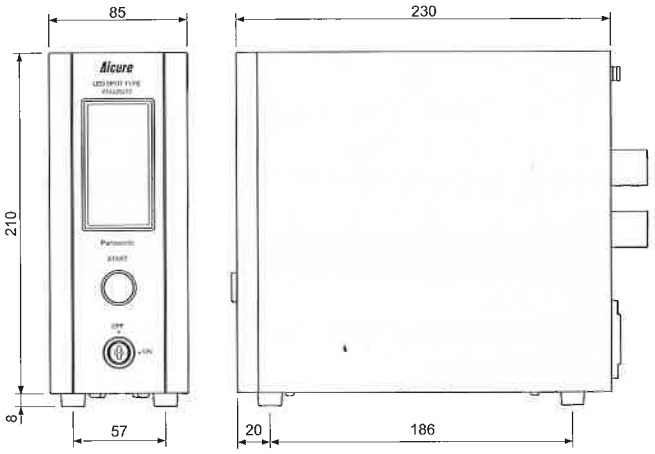
*1: When 100% of the initial intensity is output at an ambient temperature of 25°C. (Not a guaranteed value)
*2: The 10,000-hour LED life is an estimate based on use of the head at the standard settings and UV intensity over 70% the initial value.

Product number table

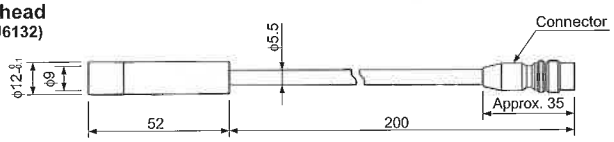
Item	Specification		Product No. for order
Controller	100 to 240 V AC controller		ANUJ5010
Head	1,400 mW/cm², with ANUJ6324 lens and 1.7-m extension cable		ANUJ61324C
	1,050 mW/cm², with ANUJ6325 lens and 1.7-m extension cable		ANUJ61325C
Spare parts Options	Head with lens	Head with ANUJ6324 lens	ANUJ61324
		Head with ANUJ6325 lens	ANUJ61325
	Head only	Head for ANUJ5010	ANUJ6130
	Lens unit	Lens for 1400 mW/cm²	ANUJ6324
		Lens for 1050 mW/cm²	ANUJ6325
	Connection cable	1.7-m flexible cable	ANUJ6220
	UV goggles	UV protective goggles	ANUP5001SG

Dimensional drawing (Unit: mm)

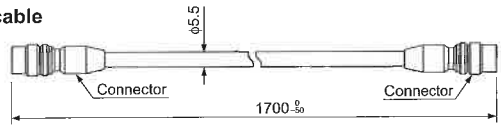
LED power supply
(ANUJ5010)



LED head
(ANUJ6132)



Connection cable

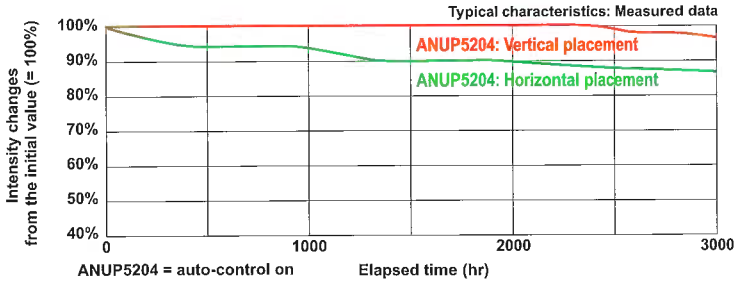


A wide variety of time-proven lamp type UV curing systems are also available to meet your needs.

International standard spot-type model

ANUP5204

- The UV auto control function provides stable, high output UV irradiation over the entire lamp life.
- High output of 4,000 mW/cm²
- Worldwide compatible power supply range from 100 to 240 V AC
- By consuming 40% less power than conventional models, this unit reduces electric power costs.
- Low temperature filters to prevent temperature rises are available.
- A wide variety of irradiation fibers, such as line fibers, are available.
- Instructions manuals are available in Chinese and English.




Vertical placement


Horizontal placement

These materials are printed on ECF pulp.
These materials are printed with earth-friendly vegetable-based (soybean oil) ink.

Please contact.....

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