

UV LED Curing Light Source

System Principle

Utilizes high capacity 365nm ultra-violet radiation LED chips, this hardening system turns electric signal into light energy signal through the controller mode control procedures, that is, high energy ultraviolet radiation LED chips produce highly pure 365nm UV, which concentrates and radiates its high energy on the UV glue through a tailor-made focus lens assembly to make the UV glue hardened rapidly according to the technology requirements improving the hardening and production efficiency remarkably.

Compared with only 2500 hours lamp life of the traditional radiator, the life of the UV LED curing system reached 30,000 hours. The LED can be lighted instantly when UV is needed. Calculated by DUTY -1/5 (preparing time-5, irradiating time-1), LED type equals to reach 10 thousand hours and 40 times of that of light bulb type, which reduces the bulb replacing time, increases the production efficiency and saves energy greatly at the same time. Whereas the bulb of the traditional light bulb irradiator is lightened constantly when working, which does not only consume unnecessary power but also shortens the life of the bulbs.

As showing in right figure, it can be seen that decreasing of the production cost and operation cost when using the irradiator of this system comparing the LED type with that of traditional light bulb does not only increase the efficiency of the enterprise but also strengthens the market competitiveness at the same time.



Fuzhou Eastoptics Inc.

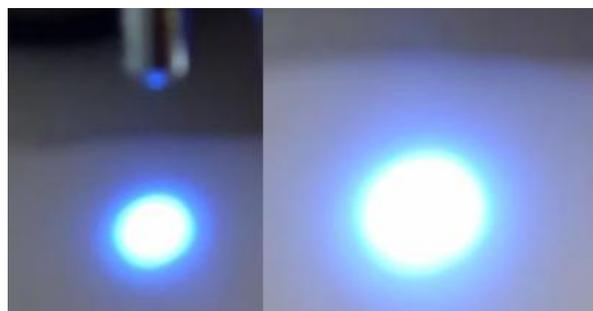
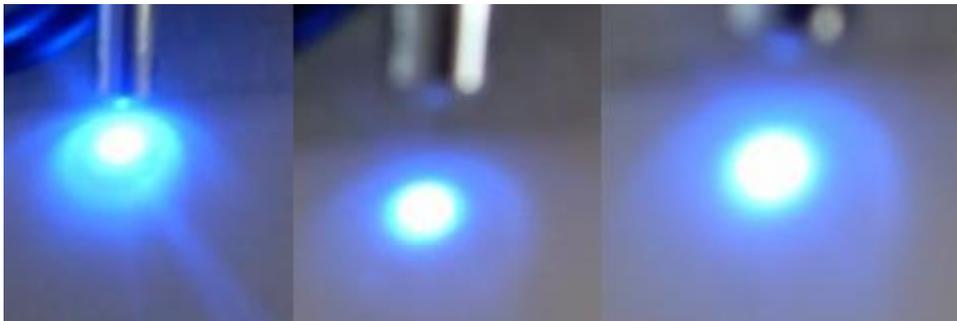
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Specifications:

- 【Power Supply】 DC 5V 6A
- 【Power】 ~50W
- 【Size】 140L*90W*58Hmm
- 【Diameter of fiber】 Φ 4.5mm
- 【Light Source Channel】 Up to 4 Channels
- 【Length of fiber】 3~5m
- 【Wavelength】 365nm \pm 5nm
- 【Timer Ranger】 0~9999.9s
- 【Operation Method】 Auto or Manu
- 【Luminous flux adjustment】 0%~100%
- 【Operation Distance】 20mm
- 【Environment】 Temperature 0-50°C,Relative humidity 20-85%

Features:

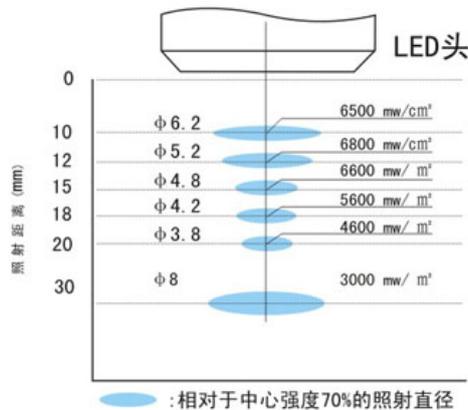
- 1) Ultra size design,only 1/8 size of traditional machine
- 2) Good cooling design
- 3) USB control pad
- 4) Six kinds of focus lenses(Φ 3mm, Φ 4mm, Φ 6mm, Φ 8mm, Φ 10mm, Φ 12mm)



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Light Power distributing

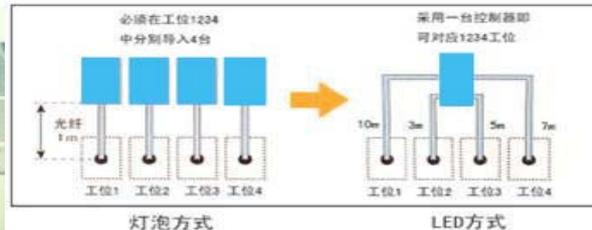
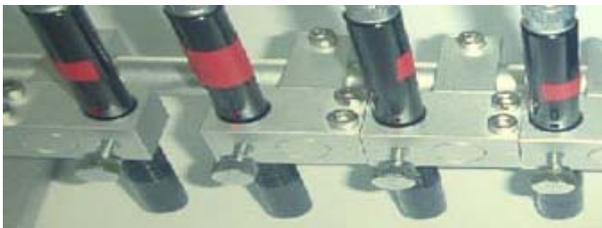


5) Up to four respective heads(Upon your request)

It needs four irradiators to deal with four different positions for the traditional light bulb irradiators, but this system is able to use only one controller to solve the problem completely, and each irradiator head can control its corresponding position separately and the various parameters of time, intensity, timing etc. needed by each position can be set respectively without any interaction, thus reduces the primary investment on the equipment for the factory.

6) Highly Safety

Only 5V low voltage power supply design.



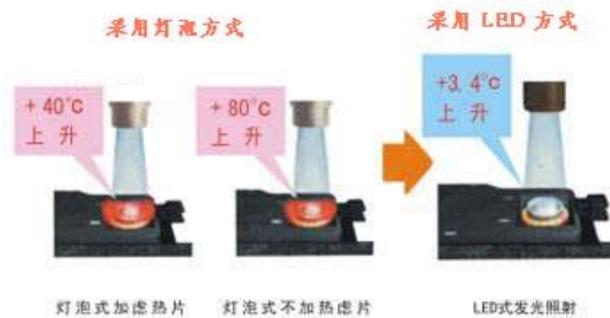
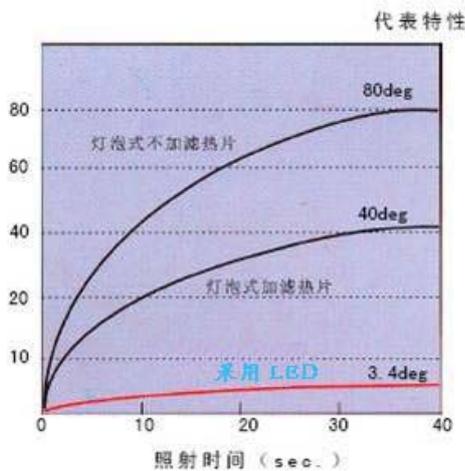
Smart curing program

This system does not only restrain heat distortion of the objects irradiated, but also can restrain contraction deformation during hardening of resin at the same time as the controllers of the system support 8 kinds of programs and 6 large-step mode irradiation max. Therefore, it is most suitable for application that requires high quality low temperature high precision bonding. Whereas the traditional light bulb irradiator cannot meet the requirement of high quality bonding.

6) Restrain Heat Distortion

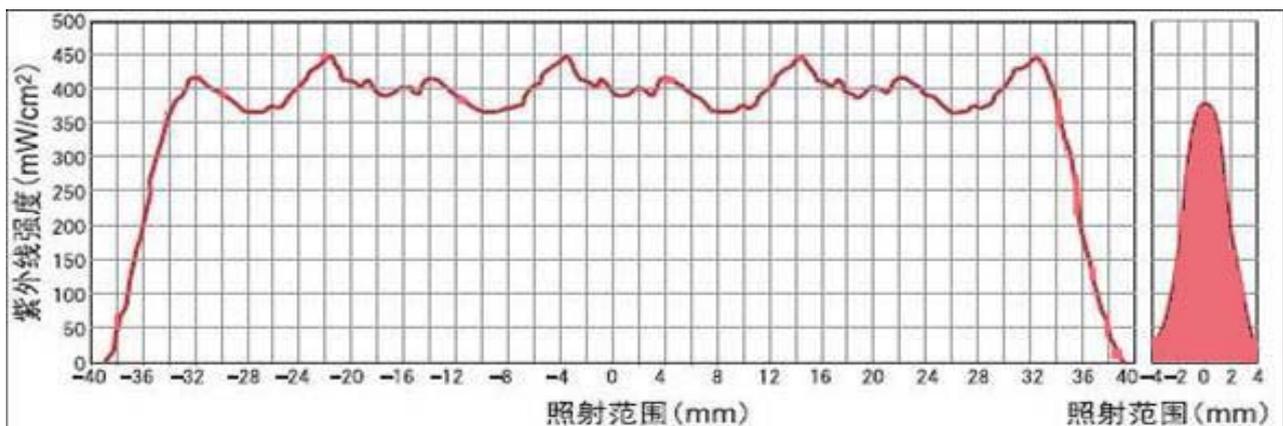
The light is 365nm pure UV, which can restrain the temperature increasing of the surface of the irradiated object as it does contain infrared light and other miscellaneous wavelengths, and it is most suitable for applications of thin plastic lens and so on as their component parts need to restrain heat distortion, and high precision bonding. Whereas the traditional light bulb irradiator with many kinds of wavelengths (including infrared wavelength) makes the surface temperature of the irradiated objects rise up to 40~80°C, thus causing displacement when bonding objects as a result to produce bad products.

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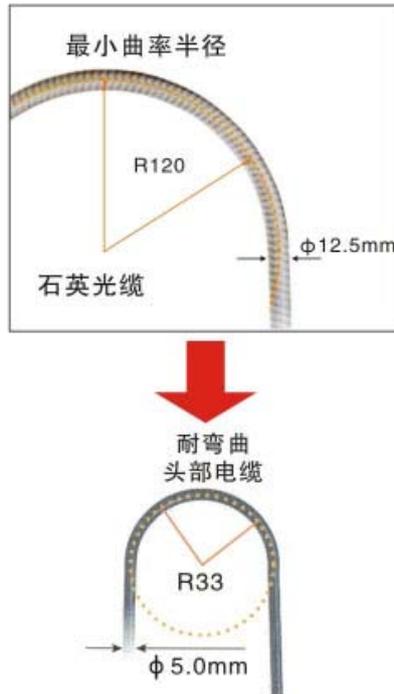
7) Output steady energy

This system is not only able to control each irradiated passage separately, but also cannot reduce UV intensity due to increasing of irradiated passages because each irradiator head irradiates by independent LED, so it can keep max irradiation intensity; whereas increasing of the branches of the traditional light bulb irradiator will reduce the output energy of each branch in the irradiation energy inventory.



8) Resistant curve cable

In response to constantly improve the utilization of automation, the system adopts bending resistant cable with a bending rate over 10 million times. But the radius of the minimum bending rate of the quartz optical fiber pipe used by the traditional light bulb irradiator is R120, and pipe is easily broken and needs more expensive replacing cost.



LED curing machine application

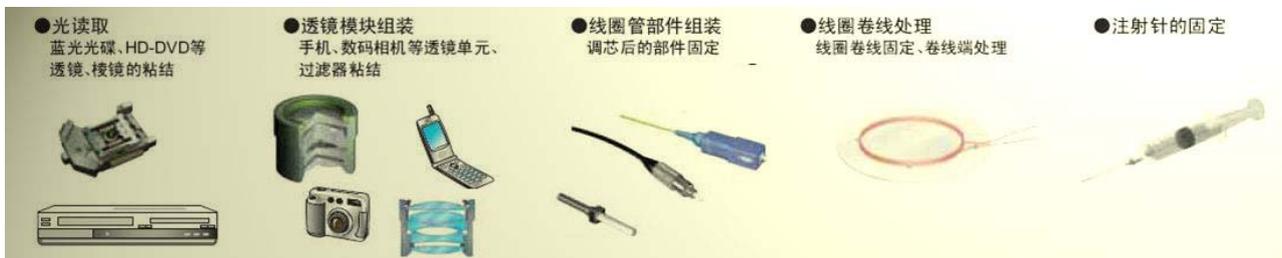
Application of light head component: Bonding of lens and prisms of BLU-RAY DVD and so on.

Lens module components: Bonding of lens units and filters of mobile phone, digital cameras and so on.

LCD components parts: Seal of liquid crystal injection mouth, OLB reinforcement and TAB-COG strengthening.

Bonding of LCD/DLP optical engine lens and optical fiber connectors; Bonding of special shaped component parts of hard disc parts, photoelectric switches, relays and so on, fixing of coil wires and treatment of coil ends, fixing of injection needles, small prisms, fixing and bonding of mini-motor spare parts, printers, precision parts of wristwatches, art & crafts as well as other emerging areas.

Subassembly application



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LCD/DLP光学引擎调整后粘照射



镜头及滤光片粘照射



数码镜头的IC粘照射



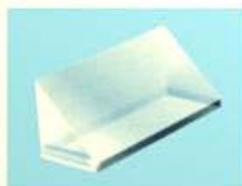
镜片胶合粘照射



DVD/CD光头粘照射



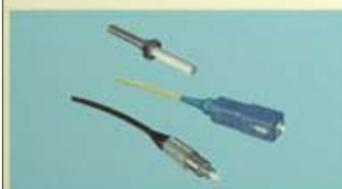
液晶注入入口密封及OLB增强



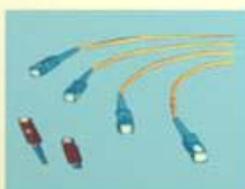
小型棱镜粘接



硬盘、磁头等粘照射



光纤连接器调芯后部件粘照射



光纤着色粘照射



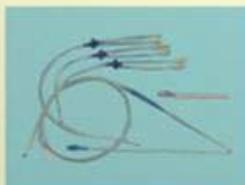
光电开关/异型部件粘照射



耳机音圈粘照射



微型马达的零件粘照射



医疗用品粘照射



注射针固定粘照射



复合器的粘照射