

# UV Curing from Fusion UV

## Superior Technology and Unparalleled Service

Fusion UV Systems is known for its superior UV curing technology and service capabilities. We invented microwave-powered UV curing technology over thirty-five years ago and today produce the most advanced UV curing systems available. Couple that with Fusion UV's unparalleled service capabilities and you'll understand why manufacturers, large and small, trust Fusion UV for their UV curing needs. Read on to learn more about why you should choose Fusion UV.

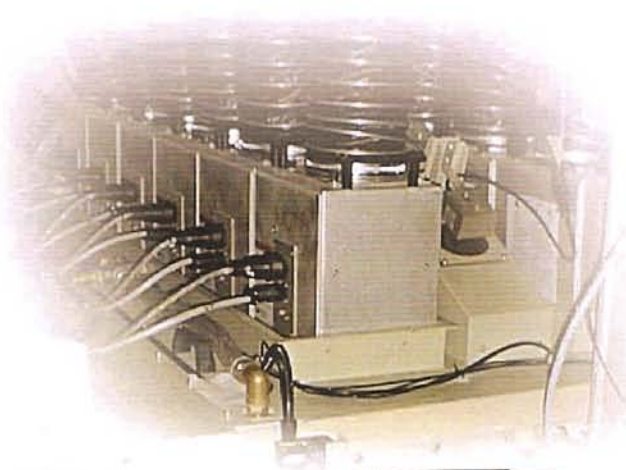
## Superior Technology

### **A Modular State-of-the-Art Irradiator**

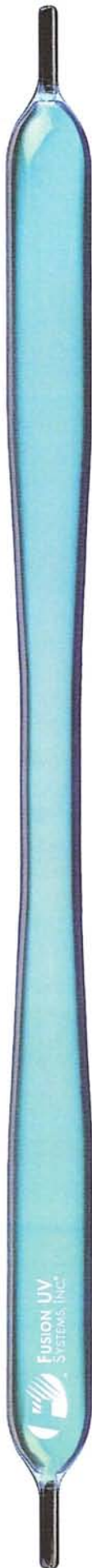
The bulb and reflector assembly are housed together in the irradiator (examples shown below). A focused elliptical reflector concentrates the maximum amount of UV energy on the substrate. Like all UV curing systems, cooling is required for proper operation. Fusion UV's air cooling system forces filtered air across the bulb from the back of the reflector. Dirt, dust and vapors are kept away, maintaining system cleanliness and reducing maintenance. Bulbs themselves emit less infrared energy, so there is significantly less heat to substrates than from arc lamps.

There are no limitations on cure widths. Systems range from a single module to large systems of multiple modules. Available in 10-inch and 6-inch lengths, modules can be placed end-to-end for uniform wide cure, and controlled independently to save energy costs for narrow width runs on wide systems.

The modular irradiators can also be placed in any orientation, allowing maximum flexibility, including efficient curing of three-dimensional parts.





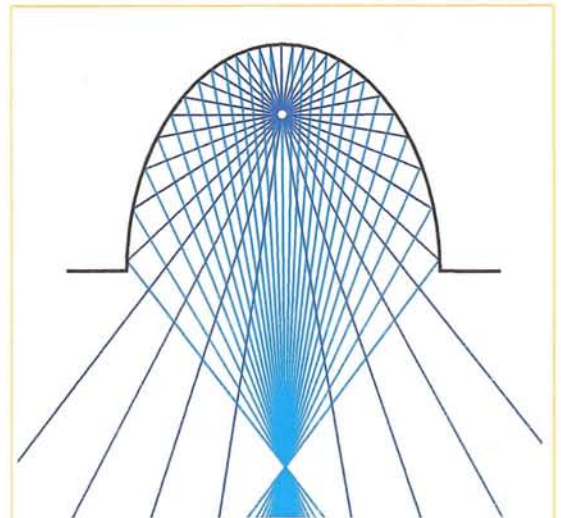


## A User-Friendly Power Supply for Maximum Convenience

Featuring an On/Off/Standby control for quicker production start-ups, the lamps turn off instantly when the line stops for web breaks, plate changes, or any other reason. Complete safety and production line interlocks are built in, automatically bringing lamps to full power on start-up. A control board pulls out to ease servicing. If any section of the system fails, a built-in display indicates the failure. For multiple power supply configurations, users can program one master power supply to control all others, or control by an external PLC.

## An Electrodeless Bulb for a Reliable, Long-Running Process

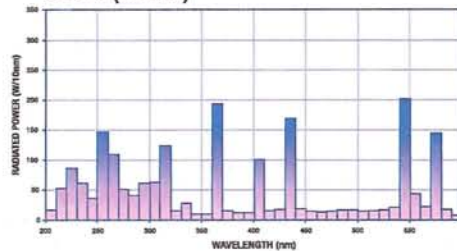
Powered with microwave energy, and without the metal electrodes required in arc lamps, this remarkable high grade quartz bulb is fully guaranteed to last **8,000 hours\***, with



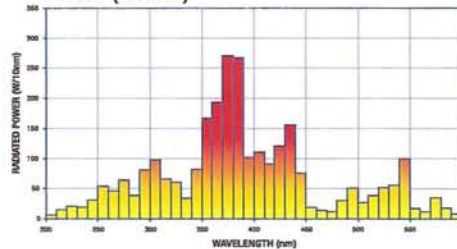
A high efficiency elliptical reflector focuses the bulb's UV energy into a narrow zone. The small diameter bulb also creates a higher peak irradiance at the focal point. End reflectors further enhance the collection of energy to the work surface. Infrared energy, usually harmful to heat sensitive substrates, is reduced by the electrodeless bulb because the small diameter bulb has a lower surface area.

### Output Spectra of 10" Fusion UV Electrodeless Bulbs

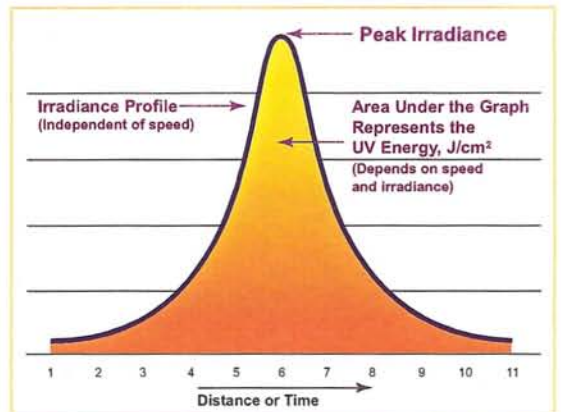
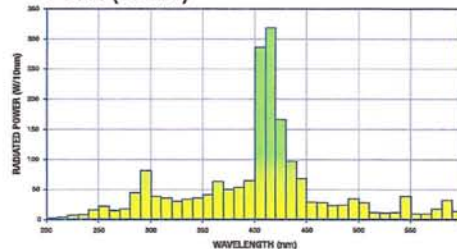
H Bulb (13 mm)



D Bulb (13 mm)



V Bulb (13 mm)



an even longer lifetime reported by most users. Easy to handle and quick to install, it takes only a few minutes to change the bulb when necessary.

The lamp starts and restarts rapidly, eliminating the need for shutters in most applications. In addition, lamp output, including additive bulbs, is stable and uniform over its life, lasting 5 to 10 times longer than a typical arc lamp. Bulbs with different spectral outputs allow you to match the lamp output to your changing chemistry and application needs for improved quality and cure speeds.

\*6,000 for additive types





# Unparalleled Service Capabilities

Fusion UV provides unparalleled service capabilities; from ensuring the optimal UV curing solution for your manufacturing process, to maintenance and repair services. We do what it takes to make sure your UV curing process operates day-in and day-out for many years to come.

## UV Process Application Expertise

No other UV equipment manufacturer can provide the level of process application expertise and resources that Fusion UV can. Before you place an order with us, we can work with you to help you design the optimal solution to deliver the results you need.

*"I have been very pleased with Fusion UV's customer service. I've been able to phone up to get quick answers to my questions. And the free training class will help me make sure we're using the correct preventive maintenance procedures."*

Russ Mitchell, Toolroom Supervisor  
BIC Corporation

Prospects and customers find our application laboratories the perfect place to develop manufacturing processes, applying formulated coatings, inks and adhesives on a variety of substrates and determining lamp configuration and part movement. Lab testing determines which UV lamps work best using our wide range of UV processing tools and techniques. We're able to quantify and optimize depth and rate of cure, maximizing process speeds and product quality.

The lab is a perfect place to field-test chemistry in a real-life setting. No need to tie up critical production lines in your plant when Fusion UV Systems' labs replicate that environment, without compromising confidentiality. If trials are needed in your plant, we can loan out equipment for testing on your line. When quantitative evaluations are



required, our analytical instruments can be applied to determine cross-link density and other finished physical properties.

## Training

Fusion UV offers customized training to meet your specific needs. Depending on the skill level and experience of attendees, we'll design a course to suit your needs – whether it's about our equipment specifically, or more general in nature such as radiometry, safety, quality control or simply an introduction to UV curing.

Fusion UV can train your maintenance and operator personnel at your facility, usually just after the equipment is installed or when there's been significant personnel turnover. Or send your maintenance and operator personnel to one of our free training classes held at our Gaithersburg, MD headquarters or our Alton, England facility. Visit the web site at [www.fusionuv.com](http://www.fusionuv.com) to see the scheduled dates and course outline.

## Maintenance and Repair Services

Our experienced and extensive technical service organization is where you are, when you need us. We provide assistance with any questions or problems, maintenance, and troubleshooting. Fusion UV Systems' Technical Service has offices throughout the world:

- Gaithersburg, MD
- Torrance, CA
- Alton, England
- Martinsried, Germany
- Tokyo, Japan
- Shanghai, China
- Beijing, China
- Guangzhou, China



These offices provide the following support:

- Product Support via telephone, e-mail, fax, website
- Equipment Repairs, either at your facility or in our Service Center
- 24/7 Emergency Support (1-800-486-9057, from the USA HQ's)

Fusion UV offers cost-effective service contracts, which are ideal for plants with few in-house maintenance resources. We also offer maintenance how-to's and tips via periodic e-mails and on our web site.



Fusion UV also has experienced distributors around the world, most with factory trained service technicians.



- Fusion UV Systems offices (addresses below)
- Fusion UV Systems distributors' and manufacturers' sales offices



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ISO 9001 Certified QMS



• U.S. Patent No. 3911318; 3872349; 3983039; 4042850; 4208587; 4359668; 4313969; 4269581; 4485332; 4507587; 4868509; 5471109; 5726815; 6419743; 6419749; 6509656; 6626561; 6646384B2; 6690112B2; 6740892B2; 6908586B2; 7037460B2; 7055990B2 • U.K. Patent No. 1482950 • Japan Patent No. 1142145; 1130584; 1974504; 2704982 • France Patent No. 7428765  
• Canada Patent No. 1024246

Other U.S. and Foreign Patents Pending. We reserve the right to incorporate changes and improvements without notice.

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