

# ***The Power of Light®***

## UV Curing Products Overview

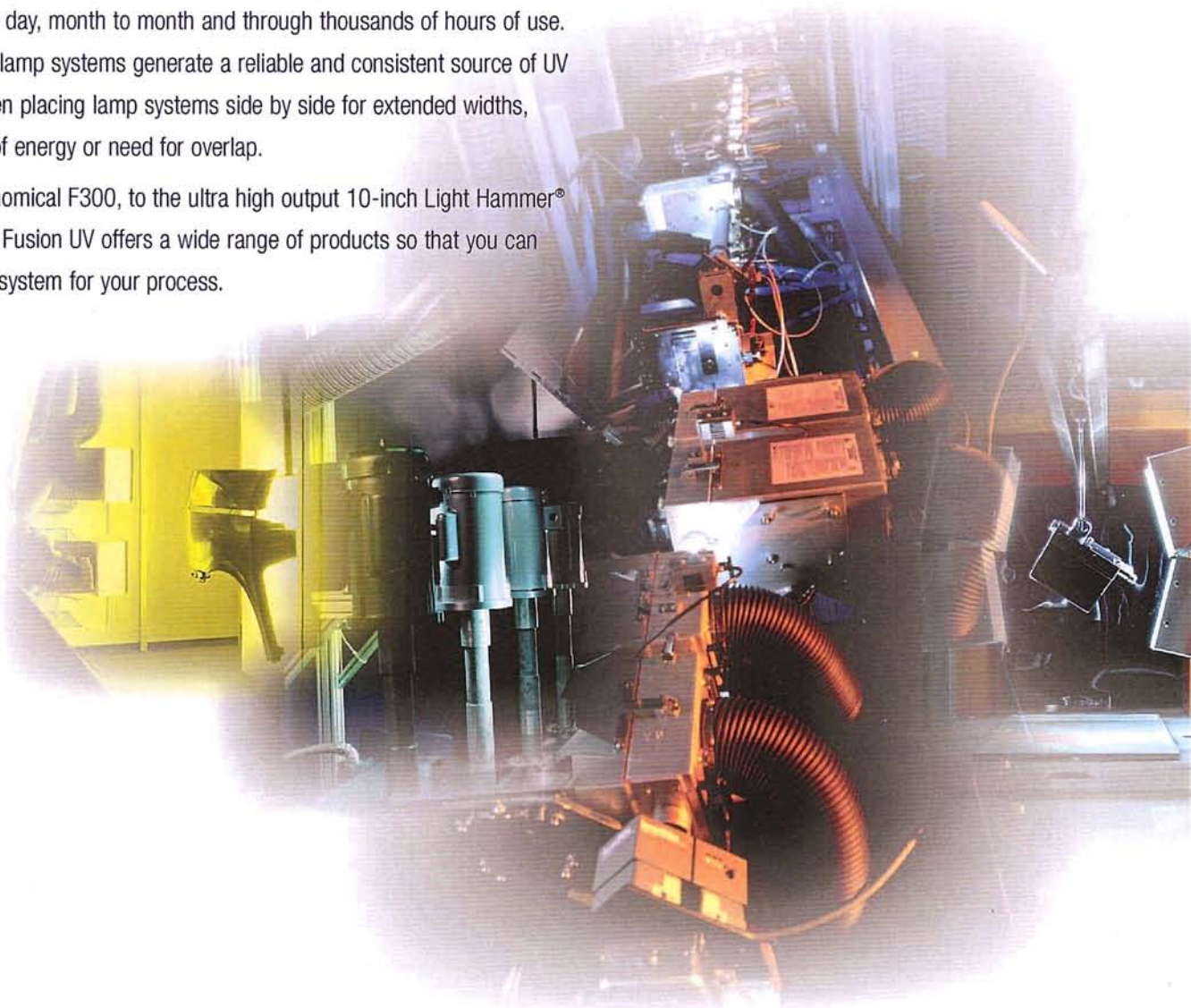
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Ultraviolet (UV) curing is a photochemical process in which high intensity UV is used to instantly cure inks, coatings or adhesives in a wide range of industries. Offering many advantages over traditional drying methods, UV curing has been shown to increase production speed, reduce reject rates, improve scratch and solvent resistance, and facilitate superior bonding.

Fusion UV Systems' microwave-powered lamps are used in hundreds of industrial ultraviolet curing applications from automotive headlamps to flooring to medical devices to wire marking and electronic components.

Our customers have come to count on the quality of cure from Fusion UV's products— day to day, month to month and through thousands of hours of use. Our high-energy lamp systems generate a reliable and consistent source of UV energy. And when placing lamp systems side by side for extended widths, there is no loss of energy or need for overlap.

From the economical F300, to the ultra high output 10-inch Light Hammer® 10 lamp system, Fusion UV offers a wide range of products so that you can choose the right system for your process.





# Feature/Model



## F300 Series

## Light Hammer® 6

## F450

## F600 Series

## Light Hammer® 10

Lamp Type	Electrodeless UV	Electrodeless UV	Electrodeless UV	Electrodeless UV	Electrodeless UV
Bulb Length	15 cm (6-inch)	15 cm (6-inch)	25 cm (10-inch)	25 cm (10-inch)	25 cm (10-inch)
Extended Curing Width	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end
Bulb Type	H, D, V, H+, Q	H, D, V	H, D, V, H+, Q, A, M	H, D, V, H+, Q, M	H, D, V
Start Up Time	20 seconds (cold start), 5 seconds (warm start)	15 seconds (cold start), instantaneous (warm start) <sup>2</sup>	15 seconds (cold start), 5 seconds (warm start)	15 seconds (cold start), 5 seconds (warm start)	15 seconds (cold start), instantaneous (warm start) <sup>2</sup>
Reflector Geometry	Semi-elliptical	Semi-elliptical	Semi-elliptical	Semi-elliptical	Semi-elliptical
Optimum Focus Distance to Sample	5.3 cm (2.1 inches)	5.3 cm (2.1 inches)	5.3 cm (2.1 inches)	5.3 cm (2.1 inches)	5.3 cm (2.1 inches)
Dichroic Reflectors	Option	Option	Option	Option	Option
Shutter	Optional Mechanical	Electronic Rapid Cycle	Optional Mechanical	Optional Mechanical	Electronic Shutter <sup>3</sup> Optional Mechanical
Power Class	120 W/cm (300 W/inch)	200 W/cm (500 W/inch)	120 W/cm (300 W/inch)	240 W/cm (600 W/inch)	240 W/cm (600 W/inch)
Power Level	Fixed or Quick Restart (optional) <sup>3</sup>	Full, Variable (25-100%) or Rapid Cycle	Dual level (160/240 W/cm) or Variable (25-100%)	Dual level (160/240 W/cm) or Variable (25-100%)	Variable (35-100%) Quick Restart <sup>3</sup>
External Control	Standard	Standard	Standard	Standard	DeviceNet™
Cooling Blower	Modular or Remote	Modular <sup>1</sup> or Remote	Modular or Remote	Remote Only	Remote Only
Air flow @ Irradiator Inlet	2.8 m <sup>3</sup> /min; 100 cfm	1.4 to 4.2 m <sup>3</sup> /min; 50 to 150 cfm <sup>2</sup>	5.8 m <sup>3</sup> /min; 205 cfm	8.2 m <sup>3</sup> /min; 290 cfm	8.2 m <sup>3</sup> /min; 290 cfm
Lamp Footprint (WxL)	208 x 168 mm (8.18 x 6.6 inches)	168 x 168 mm (6.6 x 6.6 inches)	206 x 267 mm (8.11 x 10.5 inches)	206 x 267 mm (8.11 x 10.5 inches)	206 x 267 mm (8.11 x 10.5 inches)
Compliance	CE, ETL	CE, TUV	Call for Info	CE, ETL	CE, TUV

<sup>1</sup>Not available with "electronic shutter", <sup>2</sup>Depending on Duty Cycle and Power Level, <sup>3</sup>Not for Cycling operation

## Accessories

- Special Fill bulbs available – matches the lamp to the process
- 8,000 hour warranty on H bulbs; 6,000 hour warranty on special fill bulbs
- Light shields, standard and custom for webs, sheets and 3D parts
- Conveyors
- Wide line system to 6 m (20 feet) and more
- Custom design and engineering
- Cabinet enclosures for multiple power supplies
- Turnkey system capability
- Variable power output option

**Unsurpassed power and reliability are the result of Fusion UV's continued commitment to develop improved ultraviolet curing solutions that meet our customers' demands for higher production speeds, better process control, and lower cost of ownership. WE PROVE IT WITH A 5 YEAR WARRANTY ON ALL OF OUR SYSTEMS.**

# UV Processing Systems

## Web Systems

- 15 cm (6 inch) to 6 m (20 feet) wide.
- Nitrogen inerted to 30 ppm O<sub>2</sub> available.
- Purged and pressurized available for hazardous locations.
- Full integration with process controls.
- On-line monitoring available.



## Benchtop Conveyor Systems

- Ideal curing system for small parts.
- Lamp can be rotated or raised and lowered.
- Belt speeds of .1 to 75 m/min. (.3 to 250 fpm).
- Ideal for laboratory and R&D applications.
- Rugged enough for pilot plant or production environments.



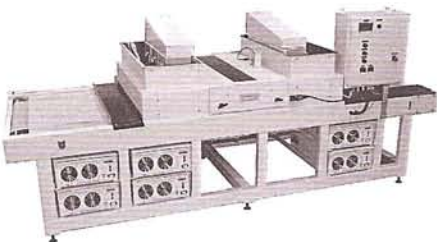
## Wire, Cable and Fiber Systems

- 360° reflector systems for maximum efficiency.
- High intensity, well defined "sweet spot" for maximum product speed.
- Nitrogen inerted systems available.
- Special reflector patented for optical fiber production.



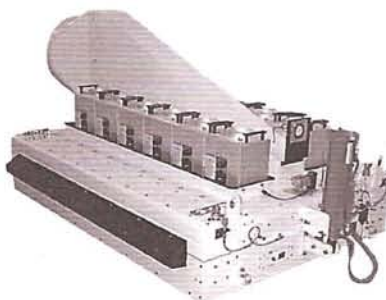
## Sheet Handling and Part Handling Systems

- Conveyor widths 5 cm (2 inch) to 3 m (10 feet) wide.
- Conveyor speeds to 900 m/min. (3000 fpm).
- Belts of Teflon coated Kevlar, nomex (anti-static) or stainless steel.
- Water-cooled beds, cold reflectors available.
- Nitrogen inerting available.



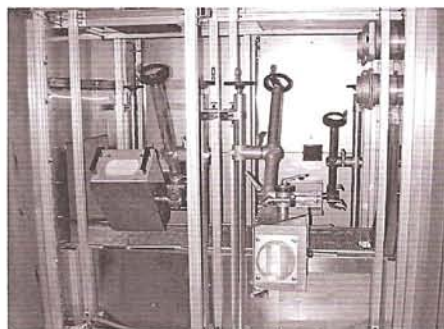
## Wide-Line Systems

- Widths unlimited.
- 8 meters wide systems in production.
- Excellent uniformity across entire product width.
- Low heat output for thermally sensitive products.
- Nitrogen-inerted systems available.



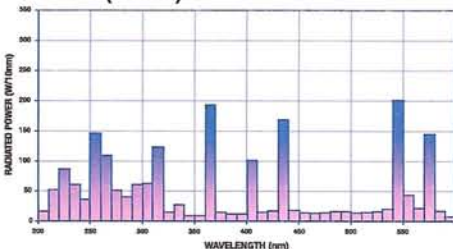
## Special Product Handling Systems

- Static exposure chambers.
- 3-D parts curing.
- Rotational or non-rotational cure.
- Robotic parts handling.

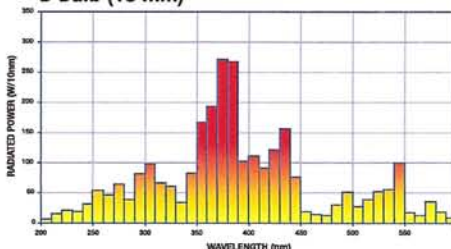


## Output Spectra of Typical Fusion UV Electrodeless Bulbs

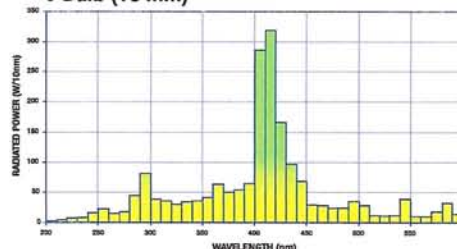
H Bulb (13 mm)



D Bulb (13 mm)



V Bulb (13 mm)





Radiation curing with ultraviolet light is considered a “green” technology. It provides a healthier environment to workers and offers several advantages over solvent-based technologies including a reduction in VOCs (volatile organic compounds), air pollutants and flammability.



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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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