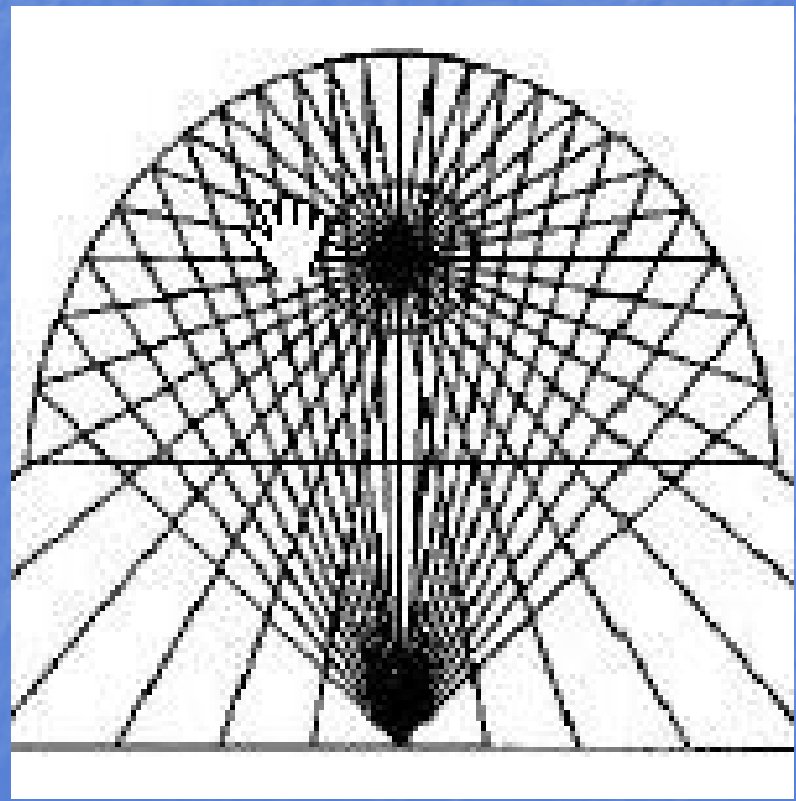
5. Fusion F300 Focused-Beam Lamps

Advantages of Fusion F300 Lamps

- Very high intensity over a wide area (1” x 6”)
- Virtually no bulb degradation
- 6,000 hour bulb life
- Lamp out-indicator
- Simple to operate
- Reliable

Fusion F300 Focused Beam and Microwave Driven

- Focused-Beam
  - An elliptical reflector produces a narrow 1”x 6” curing area at 2.1”
- Microwave Driven
  - Microwave energy is used to excite the gas inside the bulb instead of electrical energy.



Fusion F300 Specifications

Curing Footprint	1” x 6”
Intensity (UVA, 320-400 nm)	2,500 mW/cm^2
Focal Length	2.1”
Lamp Type	Microwave
Shielding	Conveyors only
Shutters	Conveyors only
Power Supply	Transformer
Bulb Warranty	6,000 hours (D)
Bulbs	Shortwave (H) Longwave (D) Visible (V)

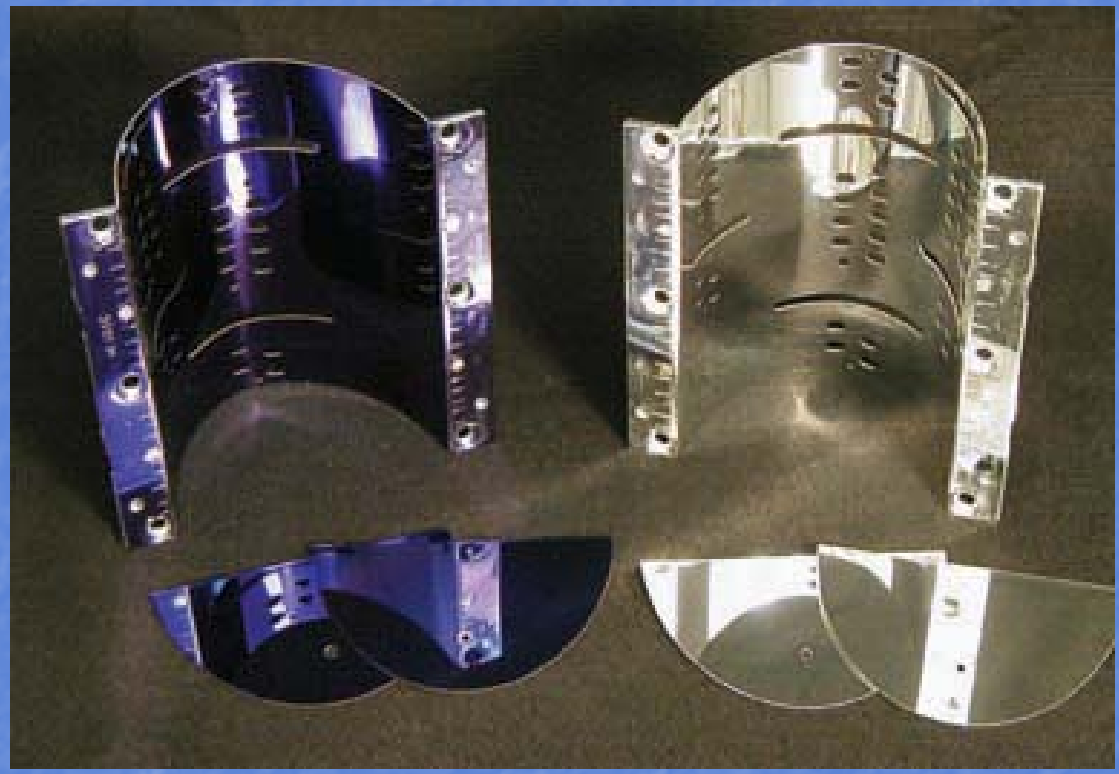
Fusion F300s in Use

- Fusion F300s from DYMAX are only used in DYMAX conveyors.
- Contact Fusion directly to purchase Fusion F300s or other Fusion products.

Fusion F300 Spectral Output

	Contains	Main Emission
H (Shortwave)	Mercury	210-315 nm
D (Longwave)	Mercury and Metal Halide	350-400 nm
V (Visible)	Mercury and Gallium	400-450 nm

Fusion F300 Cold Reflectors



Fusion F300 “cold” reflectors are dichroic which reflects UV, but reduces visible light and IR resulting in lower temperatures. A cold reflector results in 5 to 20°C (10 to 35°F) reduction in substrate temperature.

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Fusion F300 Bulb Degradation

- There is virtually no bulb degradation.
- Reflectors may become cloudy due to vapors. Clean and replace reflectors as necessary.

Setting Up a UV Curing Process

- Overexposure
  - UV curing resins can typically tolerate over-exposure from 100% to 500% without any degradation.
- Validation Intensity
  - A UV curing process should be operated at a higher intensity/energy than the validation intensity/energy to allow for intensity degradation.

Maximizing Performance

- Replace Bulb when it...
  - Won’t ignite (Lamp out indicator)
- Reflectors
  - Clean or replace reflectors as needed
- Cooling/Filters
  - Replace filters as necessary
  - Do not obstruct blowers

Warranties Lead Times

- Warranties
  - F300 - 1 Year
  - D Bulb - 6,000 hours
  - H and V bulb – 8,000 hours

- Lead Times (not including shipping)
  - 10 working days (or less, 5 day average)