

Heraeus Noblelight Fusion UV Inc.

## VPS/I600 and VPS/I250

### Variable Power Systems

For more than thirty years, microwave-powered lamps from Fusion UV have been the system of choice for demanding production applications around the world. Now you can have variable power level control and state-of-the-art automatic control systems as well.

In addition, the VPS system continues our unique modular lamp concept of unlimited effective lamp width. All Fusion UV bulbs and spectra are compatible. And Fusion UV's extremely long bulb warranties and built-in reliability come standard.

The VPS is production-proven to meet your demand for higher production speeds, better process control, enhanced reliability and ease of use.

#### VPS6 Power Supply

- Power level controllable from 35% to 100%, in 5% steps.
- An optional module providing 1% step control from a 4-20 MA signal or 0-10 VDC signal provided by the customer.
- Maximum output at 100% power level:
  - 600 watts/inch (240 watts/cm) for the I600
  - 375 watts/inch (150 watts/cm) for the I250
- Automatic adaptation to 50 or 60 Hz power sources—unaffected by minor power line voltage variations.
- Fully certified to applicable European and U.S. regulations and requirements, the VPS6 powers I600 and I250 irradiators.

#### I/O Module

Each lamp system has an Input/Output module to collect remote interlock and control information. Two I/O configurations are available:

#### Customer I/O Module:

For installations where lamps are controlled as a single group.

#### Multi-Row I/O Module:

For installations requiring more than one row or control group; up to three groups can be supported by one module.

The I/O Module provides interlock connections for:

- RF detectors
- Pressure blower
- Exhaust blower
- 3 User-defined connections
- Control input connections including:
  - Remote on/Remote off
  - Remote stepped (5%) power control
  - Remote 1% power control
- 4 user-selectable relay outputs to provide system status and control outputs.
 

Examples:

  - Lamp off
  - Standby
  - High voltage on
  - Lamp on



# Specifications: VPS/I600 and VPS/I250

All specifications are for a 10.5 in. (270 mm) single lamp system. Larger systems are made by adding more irradiators and power supplies. Irradiator modules placed end-to-end form illumination systems of unlimited length, i.e. multiples of 10.5 in. (270 mm). Items with an asterisk (\*) increase proportionately with the number of lamps in the system.

## Irradiator: Model I250 Irradiator with Blower: Model I250B

**Lamp Power:** Full power: 375 watts/in. (150 w/cm), \*3750 watts total.

**\*Dimensions:** 10.5 in. (270 mm) long x 8.2 in. (210 mm) wide at irradiator base x 13.1 in. (330 mm) high for I250 or 26 in. (650 mm) for I250B.

**\*Weight:**

- I250: 30 lbs. (14 kg)
- I250B: 57 lbs. (27 kg)

**\*Cooling Air:** Minimum 205 cfm (5.8 m<sup>3</sup>/min.) of filtered air at 5.0 in. water gauge (1.24 kPa) at the inlet (4.4 in. wg, 1.09 kPa inside the irradiator housing).

**\*Exhaust:** Minimum 300 cfm (8.5 m<sup>3</sup>/min.) at 0.2 in. water gauge (50 Pa), measured in the light shield.

**Reflector Geometry:** Elliptical focus 2.1 in. (53 mm) from irradiator face. (209 end reflectors available for far-field curing).

**Footprint:** Same as all Fusion UV 10 in. (254 mm) irradiators.

**Light Shield:** Available upon request to customer specifications.

**Bulbs Available:** H, H+, D, V, Q.

**Accessories:** Dichroic reflectors.

## Irradiator: Model I600M

**Lamp Power:** Full power: 600 watts/in. (240 w/cm), \*6000 watts total.

**\*Dimensions:** 17.3 in. (440 mm) high x 8.2 in. (210 mm) wide x 10.5 in. (270 mm) long.

**Weight:** 36 lbs. (16 kg)

**\*Cooling Air:** Minimum 270 cfm (7.6 m<sup>3</sup>/min.) of filtered air at 8.7 in. water gauge (2.17 kPa) at the inlet (6.4 in. wg, 1.6 kPa inside the irradiator housing).

**\*Exhaust:** Minimum 375 cfm (10.6 m<sup>3</sup>/min.) at -0.2 in. water gauge (-50 Pa) measured in the light shield.

**Reflector Geometry:** Elliptical. Focus 2.1 in. (53 mm) from irradiator face (209 end reflectors available for far-field curing).

**Footprint:** Same as all Fusion UV 10 in. (250 mm) irradiators.

**Light Shield:** Available upon request to customer specifications.

**Bulbs Available:** H, H+, D, V, Q, M.

**Accessories:** Dichroic reflectors.

## VPS6 Variable Power Supply

**Power Supply:** Model VPS6

**\*Dimensions:** 29 in. (740 mm) long x 16.5 in. (420 mm) wide x 8.5 in. (220 mm) high.

**Rear Clearance:** 12 in. (300 mm) required.

**\*Weight:** 192 lbs. (87.3 kg)

**Output Power Levels:**

- 35% to 100% in 5% steps (standard).
- 1% steps optional.

**Interconnecting Cables:** Standard cable length supplied by Fusion UV is 26 ft. (8 m). Other lengths available. New HV and control cables are required when mating existing I600 and I250 irradiators to the VPS.

**Cooling:** Dual 2-speed brushless DC cooling fans.

**Control Voltage:** Supplied Internally.

**Display Panel:** Can display in English, French, German, Japanese, Spanish or Turkish.

**Multiple Lamp Systems:** Master, Slave, Row and Column configurations are software-based and programmable at the display panel. No cable or hardware changes are required.

## Reliability Features

Automatic filament power control for maximum magnetron life. "Moding Manager" warns user of impending end-of-life failure.

## Control Architecture

The VPS system employs ECHELON® LonWorks® for control and communications.

## Utilities

**3-Phase Voltage\*\*:** 380-415/440-480 V (50/60 Hz).

**Maximum Line Power:** 9.3 kw @ 100% power.

**Maximum Line Current:**

- 50 Hz 28 Amps
- 60 Hz 25 Amps

**Compressed Air:** None required.

**Water:** None required.

\*\*220-240 V version of VPS available for use with I250 up to 300 watts/in. only.

Note: If using a remote cooling or exhaust blower assembly, contact Fusion UV for dimensions and performance requirements.

Contact your local Heraeus Noblelight Fusion UV office for an engineered solution for your specific requirements.

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