# VBP Single-mode CW Fiber Laser

Everfoton's VBP Single-mode Fiber Laser can offer a total output power of up to 9kW. It utilizes the self-developed ring beam fiber and combiner to provide core and ring output modes. The power is independently adjustable with a power ramp up and down function, ensuring no spattering during welding and significantly enhancing processing quality and efficiency.


## Applications

- Power battery pack
- Hair-pin
- Intelligent automobile manufacturing
- 3C electronics

## Characteristics

- Single-mode core beam
- Independently adjustable fiber core/ring core power
- Multiple protection against high reflection
- Waveform editing, Power ramp up and down
- Integrated remote monitoring

# SPECIFICATIONS

## Optical Characteristics

| Model | FFSC-2000SM/4000-VBP | FFSC-3000SM/6000-VBP |
|---|---|---|
| Operating Mode | CW / Modulated | |
| Output Power (W) | 6000 | 9000 |
| Core Output Power (W) | 2000 | 3000 |
| Ring Output Power (W) | 4000 | 6000 |
| Power Range (%) | 10 - 100 | |
| Core Beam Quality ($M^2$) | 1.2 | 1.3 |
| Ring Beam Quality (mm x mrad) | < 4 | < 5 |
| Output Power Instability at 25°C (%) | < ±1.5 (2 Hours) | |
| Central Wavelength (nm) | 1080 ± 5 | |
| Spectrum Width FWHM (nm) | 5 - 8 | |
| Modulation Frequency (kHz) | 5 | |
| Red Laser Power (μW) | > 200 | |

## Output Cable Parameters

| | | |
|---|---|---|
| Output Mode | QBH | QD |
| Cable Length (m) | 7 | 10 |
| Central Core Diameter (μm) | 14 | 20 |
| Ring Core Diameter (μm) | 100 | 120 |
| Bending Radius of Cable (mm) | 200 | |

## Electrical Characteristics

| | | |
|---|---|---|
| Operating Voltage (VAC) | 340 - 420V, 3P4W 50 / 60Hz | |
| Rated Power Consumption (kW) | 18 | 27 |
| Control Mode | AD, Ethernet | |

## Other Parameters

| | | |
|---|---|---|
| Operating Temperature (°C) | 10 - 40 | |
| Relative Humidity (%) | 10 - 80 | |
| Cooling Method | Water Cooled | |
| Water-cooling Temperature (°C) | 25 ± 1 | |
| Water-cooling Flow (L/min) | > 70 (Laser), 1.5 - 2.5 (QBH) | > 100 (Laser), 1.5 - 2.5 (QD) |
| Water-cooling Pressure (Bar) | 3 - 5 | |
| Joint Diameter (mm) | 25 | |
| Minimum Cooling Capacity (kW) | 12 | 18 |
| Dimensions W*D*H (mm) | 735 x 750 x 650 (excluding lights and casters) | |
| Weight (kg) | 230 ± 10 | 250 ± 10 |