



# OEM Compact Fiber Laser module

**Preliminary**

## 1090nm 10-20W CW/M With GTWave™ Technology

### Features

- CW or Modulated to 50kHz (modulated pulses 10µs to CW)
- TEM<sub>00</sub> ( $M^2 < 1.1$ ), BPP 0.38 mm.mrad
- Efficiency up to 10X equivalent Nd YAG lasers
- Spot size to sub 10µm
- Back reflection tolerant BDO & optional isolator
- High reliability optics, diode MTTF > 400,000 hours
- Factory sealed maintenance-free operation
- 2-year standard warranty (additional warranty options available)
- Optional (on selected products)
  - Isolator
  - Beam Expanders

### Applications

- Micromachining
  - Precision welding
  - Bending
  - Bonding
  - Soldering
  - Sintering
  - Annealing
- Marking and engraving

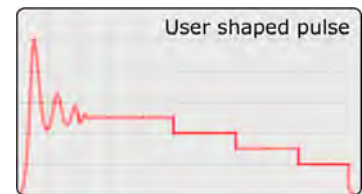
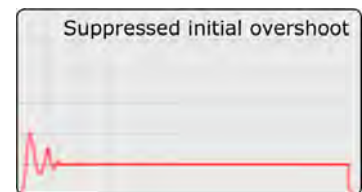
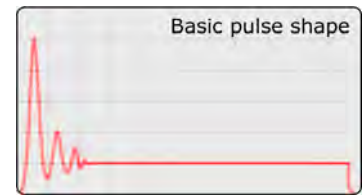


## redPOWER™

The redPOWER™ series of fiber lasers from SPI has been designed to meet the highest standards of reliability, repeatability and user safety.

The commercial advantages of fiber lasers over alternative technologies are far reaching: improved line speeds, finer machining capabilities, reduced downtime and lower cost of ownership, giving users a leading edge advantage. As a result, SPI's lasers are finding new applications in markets such as medical, electronics, plastics and printing.

Significant design features of the SPI unit include thermal management, low noise, output stability and system-to-system repeatability. Every care has been taken at the design stage to ensure our products offer the multiple user a long and maintenance-free life.



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**CW/M** With GTWave™ Technology

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## Specifications

	Specifications	10W Module	20W Module
<b>Optical</b>	Nominal output power	10W	20W
	Mode of operation	CW, Modulated, gain switch	
	Polarization	Random	
	Central emission wavelength	1090 ± 5nm	
	Output power tuneability (CW)	10-100%	
	Output power variation over 12hr period	<2%	
	<sup>1</sup> Output power noise (1KHz-20MHz)	<1% RMS	
	Emission Linewidth FWHM	<2nm	
	Output fiber length	6.2m±0.5	
<b>Collimated Output Beam</b>	Beam diameter	5mm ± 0.5	
	Divergence	<0.4mrad	
	M <sup>2</sup>	<1.1	
	Beam parameter product (BBP)	<0.38mm.mrad	
<b>Electrical</b>	Typical Power consumption (start of life 25°C)	<60W	<110W
	Operating voltage	10VDC	18VDC
	Control interface	Analogue input for high/low current set point. Digital (TTL) diode driver enable and switching between high/low current set points. Digital (TTL) selection of fast/slow rise time. Analogue input enables entry of customized waveforms	
	Maximum modulation speed	50kHz	
<b>Mechanical</b>	Dimensions	230 x 130 71mm	
	Weight	<4kg	
<b>Environmental</b>	Operating temperature (case)	5-45°C	
	Humidity	5-85%RH	

<sup>1</sup> Typical at rated output power | [For compliance and safety information, click here](#)

## Accessories

- Beam expanders 0.4X-2.8X  
[Click here for datasheets](#)
- Isolator [Click here for datasheet](#)
- Extended warranty options

## Terms and conditions

Some specific combinations of product and optional accessory may not be available. These lasers are designed as products for incorporation or integration into other equipment. All product information is believed to be accurate and subject to change without notice. A Complete product specification will be issued on request and also at time of order acknowledgement. The user assumes all risks and liability whatsoever in connection with the use of the product or its application.

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