



redPOWER® OEM

Power and control for cutting, welding, micro-machining and additive manufacturing.

CW Fiber Laser.



Key benefits and features

Our **redPOWER®** High Power K1.1 500W - 1kW OEM Fiber Laser delivers, substantial commercial and performance advantages over alternative technologies and products, offering a leading edge advantage.

Full Feature List

- Compact design for OEM incorporation
- Building block for cutting, welding and material processing equipment
- Back reflection protection and tolerance
- Integrated integrity monitoring and safety shutdown
- Digital / analog / comms control interface options
- Integrated pilot Laser
- Power, temperature and status monitoring
- LLK-Q (QBH compatible) / LLK-D connector options
- Single mode $M^2 \leq 1.1$ or Multimode $M^2 = 6.5$ or 15
- High electro-optic conversion efficiency of 30%

Optimised for...

OEM Fiber Laser systems offering integrators the capability to manufacture equipment for cutting, welding and other material processing applications.

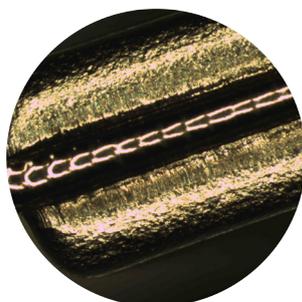
OEM Fiber Lasers are designed to enable integrators to maximise their value added content in end user systems and to differentiate their product in terms of:

- Customisation of the control interface and functionality
- Performance for the specific application
- Enhanced field serviceability

Go to spilasers.com/applications for further information on configuration, integration and applications.



Thick Metal Cutting
Mild Steel, Stainless Steel, Aluminium



Welding
Stainless Steel



Cutting
Copper, Brass, Aluminium

Benefits

- Ease Of Integration
- Flexible Functionality
- High Efficiency & Reliability
- Zero Maintenance

Key Features

- 500W – 1kW
- SM or MM Beam Quality
- CW and Modulated
- 1070nm Wavelength
- Fiber Delivery Options

Applications

- Cutting
- Welding
- Additive Manufacturing
- Material Processing

Industries

- Aerospace
- Automotive
- Electronics
- General Assembly

UK +44 1489 779696 | USA +1 408 454 1170
 CHINA +86 21 6171 9470 | KOREA +822 3151 9591
www.spilasers.com/support
 © SPI Lasers UK Ltd
 SM-S00409-1

Go to spilasers.com/products for information on accessories, extended warranties and longer beam delivery optic lengths.

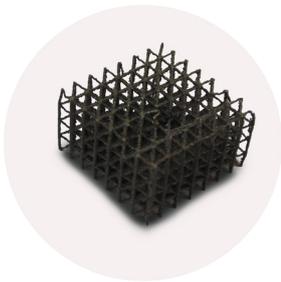
Product selection parameters

Model	500W	1000W
Performance Data		
Central emission wavelength	1070 ± 10 nm	
Mode of operation	CW and Modulated	
Output power tunability (CW)	5 – 105%	
Emission bandwidth	<6.0nm	
Modulation bandwidth (digital)	20kHz	
Modulation bandwidth (analogue)	10kHz	
Optical rise time / fall time	<20 μS / <10 μS	
Red pilot Laser	Standard	
Pilot Laser wavelength	630 - 680nm	
Pilot Laser classification	Class 3R	
Output Beam Characteristics		
Delivery fiber core diameter	Single mode / 50μm / 100μm options	
Beam parameter product (BPP) (nominal)	0.37 / 2.5 / 5.0 mm.mrad	
M2 (nominal)	1.1 / 6.5 / 15	
Polarization	Random	
Electrical		
Control interface	Analog / Digital	
Communication interface	Ethernet /RS-232 / RS-485 / CAN bus (1)	
Diode PSU Voltage (Max)(2)	50.4V	100V
Diode PSU Current (Max)(2)	45A	45A
Electro-optic conversion efficiency (typ)	30%	
Auxiliary PSU DC Voltage / Current (2)	24V / 2A	
Mechanical		
Dimensions (Enclosure)	W 378 x D 664.5 x H 80mm	
Weight	< 48kg	
Fiber delivery connector / Option	LLK-Q (QBH compatible) / LLK-D	
Fiber delivery cable length / Option	10m / 20m(3)	
Cooling	Water Cooled	
Environmental		
Operating temperature	5 - 40°C	
Storage temperature	-10 – 70°C	
Humidity	5 - 85% RH (non-condensing)	

- Notes
 1. For other options contact SPI
 2. External PSU (Customer supplied)
 3. Multimode cable options only.

Terms and conditions
 Some specific combinations of product and optional accessory may not be available. These products are Class 4 Lasers 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.

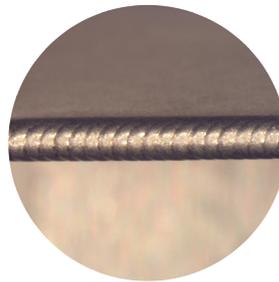
Applications



3D Printing / Additive Manufacturing
Metal Powders



Cutting
Brass, Aluminium, Copper, Mild Steel & Stainless Steel



Welding
Stainless Steel



Cutting
Mild Steel

UK +44 1489 779696 | USA +1 408 454 1170
 CHINA +86 21 6171 9470 | KOREA +822 3151 9591

www.spilasers.com/support

© SPI Lasers UK Ltd
SM-S00409-1

