redPOWER®
Multi kW OEM

Building blocks for high power Fiber Lasers.
CW/ OEM Fiber Lasers.

Key benefits and features

These high power Laser modules, based on the latest generation Fiber Laser platform, are designed to give system integrators flexibility when incorporating single or multiple units into an industrial Laser processing system. Utilising our High Power Combiner up to 3 x 1kW units can be used together. Taking advantage of 60 years' combined experience, these Laser modules combine single mode beam quality, high efficiency, fast modulation capability with features that allow ease of integration.

Full Feature List

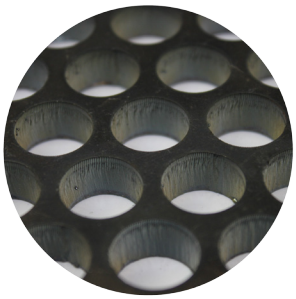
- Single modules 1kW output power
- High beam quality fiber beam delivery
- Patented back reflection protection
- High frequency modulation
- Integral pulse shaping capability
- High efficiency
- High reliability, low maintenance
- Integrated safety monitoring
- Rack mount (19") format
- Optional module system safety control

Optimised for...

- High volume OEM's to build into their own products.
- Simple integration whilst delivering high functionality.
- Adaptable system allowing OEM's to build to order so reducing stock.

Cutting
Mild Steel

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



Cutting
Mild Steel

OEM FL Modules Concept Overview

The high power Fiber Laser source comprises a number of OEM FL Modules, chosen to give the total required output power. These are optically combined within the OEM High Power Combiner (HPC), which also contains the Fiber Laser Control and Interface board, giving precise and comprehensive control of the Fiber Laser. A single fibre output from the HPC delivers the Laser power. The System Integrator adds value to these basic modules by providing the DC power supply, a suitable enclosure with environmental control where necessary, a temperature controlled coolant supply and system level safety control into the modules. The complete range of modules are designed to mount into an industry standard 19" rack mount unit, giving a consistent look to the final Laser, and facilitating ease of enclosure sourcing.

Benefits

- Lowest Entry Cost Laser For High Volume Manufacturers
- Back Reflection Protection
- Lower Energy Bills
- High Reliability
- Low Maintenance

Key Features

- Multi-Kilowatt CW Output Power
- Multiple Fiber Delivery Options
- High Frequency Modulation
- Integral Pulse Shaping Capability
- FiberView™ Software
- Small footprint

Applications

- Flat Sheet Cutting
- High Speed Welding
- Remote Welding
- Cladding

Industries

- Automotive
- Advanced Manufacturing
- Flat Sheet Cutting
- General Fabrication

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

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SM-S00462-1

Product selecetion parameters

Model	1000W OEM Fiber Laser Module	
Performance Data		
Average Output Power (W)	1000W	
Operating Modes	CW & Modulated	
Output Power Range	10 - 100%	
Long Term Output power stability (1)	+/- 1% Typical (+/-2% Specified)	
Wavelength (nm)	1070 standard	
Linewidth (nm)	5	
Polarisation	Un-Polarised	
Min. Rise / Fall Time (µs)	10	
Max. Modulation Frequency (kHz)	15	
Fiber Optic Beam Delivery		
Output Fiber Type	Single Mode	
Beam Quality/BPP (mm.mrad)(2)	TEM00M² <0.44/ 1.3	
Electrical		
Electrical Supply (V dc)	48V dc, Max 85A	
Typical Power Consumption (W)	3400	
Maximum Power Consumption (W)	4000	
Environment / Cooling		
Ambient Temperature (ºC)	15	20
Coolant Flow Rate (litres/min)	8	12
Coolant Connections	10mm hose	
Max. Relative Humidity	85% (20º), 50% (40ºC)	
Module Dimensions		
Width x Depth x Height (mm)	482 x 133 x 530	

Key Features – High Power Combiner (HPC)

	HPC	
Data		
Number of Input Ports	1 to 3	
Output Fiber Core Diameter (µm)	50	100
Output Beam Quality, M²	6	8
Beam Parameter Product (mm.mrad) (3)	2.1	2.8
Full Angle Divergence, 99.5% energy (mrad)	280	200
Pointing Diode Wavelength (nm)	630	670
Polarisation	Un-Polarised	
Min. Rise / Fall Time (µs)	10	
Max. Modulation Frequency (kHz)	15	
Electrical & Control Interface		
Modulation Capability	Integral standard & user defined pulse shapes	
Standard Interfaces	Parallel – Machines Interface, Serial – RS232, Ethernet	
Electrical Supply	24V dc, 1A	

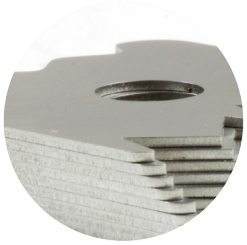
Notes
1. Constant temperature
2. Non-condensing
3. Beam Parameter Product = beam radius x half angle divergence

Terms and conditions
Some specific combinations of product specifications 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.

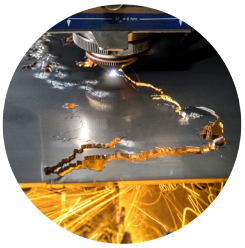
Applications

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

Cutting
Mild Steel



Cutting
Stainless Steel



Cutting
Aluminium

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