redPOWER® R4 HS Series

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

200W - 500W

CW Fiber Laser

Key benefits and features

Our **redPOWER®** series of high power Fiber Lasers deliver substantial commercial benefits over alternative technologies, offering you a leading edge advantage.

Full Feature list

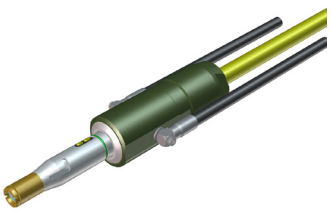
- CW or Modulated to 100 kHz
- Single mode $M^2 \leq 1.1$ or Multimode M^2 = 3.5, 6.5 or 15
- Spot size to sub 10µm
- Efficiency up to 10x equivalent NdYAG Lasers
- High stability Laser (typically <1% output power variation)
- Open loop control or closed loop control as standard
- Pulse shape equalisation (PSE) as standard
- RS232, ethernet and analogue control
- High reliability optics, diode MTTF > 400,000 hours

Optimised for...

Flexibility. Our HS series extends the performance of the standard modulation rate up to 100kHz, allowing even more accurate delivery of power for specialised material processing.

HS Variations and Connectors

Power	Cooling		M^2 Value & Cable Length				Connector	
	Air	Water	1.1	3.5	6.5	15	QCS	LLK-Q
200W	✓		6m				✓	
250W		✓	6m	6m			✓	
400W		✓	6m or 10m				✓	
500W		✓	6m, 10m or 20m		6m, 10m or 20m	6m or 10m		✓



LLK-Q (Divergent)

QCS (Collimated)

Benefits

- Faster Processing
- Lower Energy Bills
- Excellent Reliability
- Small Footprint
- Zero Maintenance

Key Features

- 200W - 500W
- $M^2 \leq 1.1$, 3.5, 6.5,15
- 100kHz Modulation Rate
- 1070 ± 10nm Wavelength
- Collimated or Divergent Output

Applications

- Cutting
- Medical Welding
- Additive Manufacturing
- Drilling

Industries

- Automotive
- Electronics
- General Assembly
- Industrial

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

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www.spilasers.com/support

SM-S00347-2

Product selection parameters

Product	200W	250W	400W	500W
Optical				
Central emission wavelength	1070 ± 10 nm			
Mode of operation	CW and Modulated			
Output power variation	<1% (typical) (1)			
Red pilot Laser	Standard			
Pulse Characteristics				
Maximum modulation rate	100kHz			
Pulse to pulse energy	<0.5%			
Minimum pulse width	<10µS			
Output Beam Characteristics				
	Collimated			Divergent
$M^2 \leq 1.1$	5.0 ± 0.7mm			81 ± 8 mrad
$M^2 = 3.5$	-	3.3 ± 0.8 mrad	-	-
$M^2 = 6.5$	-	-	-	175 ± 30 mrad
$M^2 = 11$	-	-	-	200 ± 30 mrad
Polarization	Random			
Control				
Control interface	Analogue / RS232 / Ethernet			
Control options	Closed Loop or Open Loop			
Operating voltage (VAC 50-60Kz)	240V			
Electrical				
Power supply requirements	Single Phase			
Safety interlock performance level	PL'e' (2)			
Mechanical				
Dimensions	Nominal 5U (19") rack unit 507 x 483 x 224 mm			
Weight	<48kg			
Cooling	Air	Water		
Environmental				
Operating tempature	5 - 40°C			
Humidity	5 -85% RH (non-condensing)			

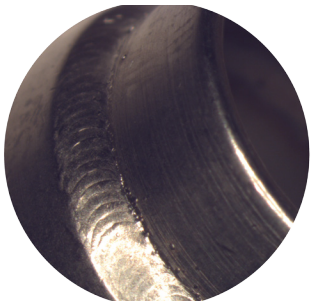
Notes
1. 8 hours at constant temperature
2. ISO 13849-1 Safety of Machinery
3. Courtesy of Sisma

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

[3]3D Printing / Additive Manufacturing
Metal Powders

Cutting
Aluminium, Mild Steel & Stainless Steel



Welding
304 Stainless

Cutting
Fine Metallic

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