



redPOWER cube

Multi kW Laser 3kW - 10kW

Providing exceptional levels of power and control for industrial applications.

CW / Modulated Fiber Laser.



Key benefits and features

Our Fiber Laser range offers a definitive solution for a variety of industrial manufacturing and precision applications, combining excellent beam quality, high efficiency and small footprint.

Full feature list

- Based on combined output from individual modules.
- Output power options of up to 10kW.
- Patented back reflection protection.
- Integrated pierce detection as standard.
- Simple integration into existing equipment.
- Replaceable delivery fiber.
- Process monitoring capability via back reflected radiation signal.
- Floor standing cabinet.
- Integrated pulse shaping capability.
- High frequency modulation.

Optimised for...

- High throughput industrial Laser processing.
- Ease of integration onto production lines, welding & cutting systems.
- Flexible control of welding operations through integrated temporal pulse shape generator.



Welding

304 Stainless Steel



Cutting

Brass, Stainless Steel,
Copper, Aluminium



Thick Metal Cutting

Mild Steel

Benefits

- Back reflection protection
- Lower energy bills
- High reliability
- Low maintenance

Key features

- Pierce detection signal
- PIPA-Q fiber termination with industry standard opto-mechanical compatibility
- Integral patented Back Reflection protection
- Range of delivery fiber options
- 50kHz Modulation rate
- Integral pulse shaping
- Easy control integration

Applications

- High Speed Cutting
- Thick Section Welding
- Cladding
- Flat Sheet Cutting

Industries

- General fabrication
- Automotive
- White goods manufacture

Model Selection Parameters

Model	3kW	4kW	4.5kW	6kW	8kW	10kW
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Performance Data

Mode Of Operation	CW and Modulated					
Output Power Range	10 -100% of specified power					
Long Term Output Power Stability ⁽¹⁾	± 2% peak					
Wavelength (nm)	1075 ± 2					
Linewidth (nm)	<10					
Polarisation	Un-polarised					
Min. Rise / Fall Time (µs)	<5/ <6					
Max. Modulation Frequency (kHz)	≤50					

Fiber Optic Beam Delivery

50µm Fiber	2.1mm.mrad BPP ⁽²⁾	N/A				
100µm Fiber	Enhanced, 3.3mm.mrad BPP ⁽²⁾					
100µm Fiber	4.5mm.mrad BPP ⁽²⁾					
300µm Fiber	13mm.mrad BPP ⁽²⁾					
Alignment Laser Wavelength (nm)	630 – 680 (Class 2)					

Electrical

Voltage Range	Standard: 380-415V or Optional 380-480V					
Supply	3 Phase + Neutral					
Max. Current Range (A)	19-25	25-32	28-37	37-50	52-66	62-80

Environment / Cooling

Ambient Temperature (°C)	5-45					
Coolant Flow Rate (litres / min) ⁽³⁾	47	58	63	79	99	121
Max. Relative Humidity	85% (20°C), 50% (40°C)					

Module Dimensions

Height (mm)	982	1336		1455		1693
Width (mm)	793					
Depth (mm)	945				955	

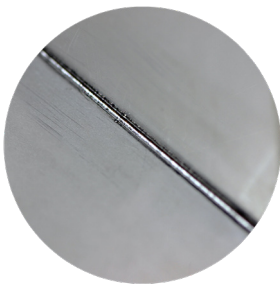
Notes

1. Constant Temperature
2. Beam Parameter Product = beam radius x half angle divergence
3. At 25°C Water Temperature

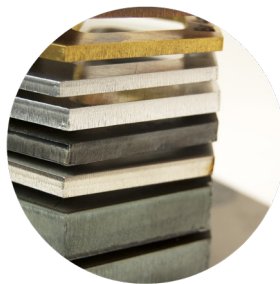
Terms and conditions

Some specific combinations of module specifications and optional accessory may not be available. These Lasers are designed as units for incorporation or integration into other equipment. All module information is believed to be accurate and subject to change without notice. A complete module 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 module or its application.

Applications



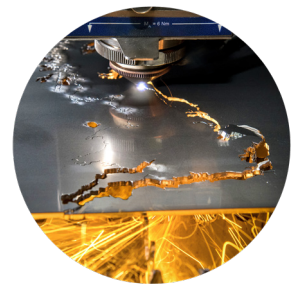
Welding
Stainless Steel



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



Cutting
Stainless Steel



Cutting
Sheet Steel

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