

AIM FIBER LASERS

Best Value Fiber Laser Series for Welding Applications

The AIM family of industrial, multi-kilowatt fiber lasers delivers the industry-leading total cost of ownership for any type of laser in welding applications, leveraging unique Coherent innovations in fiber laser components, optical designs, and manufacturing scale.

Welding applications are met with an excellent laser beam quality and stability, providing unrivalled process control, repeatability and yield. The AIM family is ideally combined with Coherent's extensive portfolio of processing heads and laser welding vision solutions, generating the highest user value possible.

Cost savings are achieved by a combination of high wall plug efficiency and a wide water-cooling temperature range, providing additional electrical cost savings combined with a reduced total carbon footprint. Leveraging Coherent's global service network of 50 service centers and 22 application labs, our customers enjoy increased system availability and productivity, minimal down time, reduced maintenance cost, and reduced cost of inventory holding.



FEATURES

- Output power: 500 W to 3 kW
- Single mode operation
- High efficiency & non-critical water cooling operation
- Best in class total cost of ownership
- Maintenance-free operation
- Worldwide certification

APPLICATIONS

- Welding of challenging materials (high-strength steel, aluminum, copper)

Specifications	AIM FL500	AIM FL1	AIM FL1.5	AIM FL2	AIM FL3
Nominal Power (kW)	0.5	1	1.5	2	3
Operation Mode	CW/Modulated				
Power Stability (%)	±1.5				
Power Range (%)	5 to 100				
Pulse Frequency Range (kHz)	CW – 5 (full depth modulation)				
Laser Beam Quality - BPP (mm x mrad), at end of process fiber	<0.375 at 20 μm, M ² < 1.1				
Wavelength (nm)	1070 ±10				
Electrical Ratings					
Supply Voltage	230 ±10% VAC, 50/60 Hz, Single Phase			380-528 VAC, 50/60 HZ, Three-Phase	
Power Consumption (kW)	<1.5	<3	<4.5	<6	<9
Cooling					
Medium	Water cooled				
Water Cooling Temperature (°C)	20 → 30, non-condensing				
Water Flow Rate (l/min.)	>5	>10	>15	>18	>18
Recommended Cooling Capacity (kW)	1	2	3	4	6
Beam Delivery					
Standard Connector Interface	QBH style				
Standard Cable Dimensions ¹	10 m, 20 μm core diameter				
Dimensions and Weight					
Dimensions (L x W x H) (mm)	482.6 x 547 x 130				
Weight (kg)	49				
Environmental Conditions					
Ambient Temperature (°C)	5 → 40				
Humidity (%)	35 → 95, non-condensing				

Notes:

1. Other fiber lengths available upon request.