Fiber Lasers

EDGE FL

Cost-Effective Fiber Laser Series for Demanding, High-Power Cutting Applications

The EDGE family of industrial, multi-kilowatt fiber lasers deliver the best total cost of ownership – without any sacrifice in performance – as compared to all other metal cutting lasers. Their unmatched combination of value and performance has been achieved by leveraging unique Coherent innovations in fiber laser components and optical design, together with our ability to manufacture in high volume.

EDGE lasers bring excellent laser beam quality and stability to the most demanding cutting applications, resulting in unrivalled process control, superb repeatability and increased yields. When paired with a product from the extensive portfolio of Coherent cutting heads, the EDGE family provides the highest possible user value.

Cost savings are achieved through a combination of high wall plug efficiency and a wide water-cooling temperature range. This translates into both reduced power consumption and total carbon footprint. With access to a global service network of 50 service centers and 22 application labs, Coherent customers enjoy increased system availability and productivity, minimal down time, reduced maintenance costs, and lower spare parts inventory costs.

FEATURES

- Output power: 6 to 20 kW
- High beam quality at all power levels
- High efficiency and non-critical water-cooling operation
- Best in class total cost of ownership
- Low total carbon footprint
- Maintenance-free operation

APPLICATIONS

- Thin and Thick Sheet Cutting
- Reflective Material Cutting

COHERENT

Specifications	EDGE FL6	EDGE FL9
Nominal Power (kW)	6	9
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	<4 at 100 µm	
Wavelength (nm)	1070 ±10	
Electrical Ratings		
Supply Voltage	380 to 480 VAC, Three-Phase	
Power Consumption (kW)	<16	<28
Cooling		
Medium	Water	
Water Cooling Temperature (°C)	20 → 30, non-condensing	
Water Flow (l/min.)	>60	>90
Beam Delivery System		
Standard Connector Interface	QF (Coherent flange connector) or QBH/QD style	
Standard Cable Dimensions[1]	25 m, 100 µm core diameter	
Dimensions and Weight		
Dimensions (L x W x H) (mm)	808 x 518 x 845	
Weight (kg)	<190	<250
Environmental Conditions		
Ambient Temperature (°C)	5 → 40	
Humidity (%)	35 → 95, non-condensing	

Notes:
1. Other fiber lengths available upon request.

Specifications	EDGE FL12	EDGE FL15	EDGE FL20
Nominal Power (kW)	12	15	20
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	<4 at 100 µm		
Wavelength (nm)	1070 ±10		
Electrical Ratings			
Supply Voltage	380 to 480 VAC, Three-Phase		
Power Consumption (kW)	<35	<45	<60
Cooling			
Medium	Water		
Water Cooling Temperature (°C)	20 → 30, non-condensing		
Water Flow (l/min.)	>120	>150	>200
Beam Delivery System			
Standard Connector Interface[1]	QF (Coherent flange connector) or QBH/QD style		
Standard Cable Dimensions[2]	25 m, 100 µm core diameter		
Dimensions and Weight			
Dimensions (L x W x H) (mm)	808 x 518 x 845	808 x 518 x 1290	808 x 518 x 1290
Weight (kg)	<325	<395	<520
Environmental Conditions			
Ambient Temperature (°C)	5 → 40		
Humidity (%)	35 → 95, non-condensing		

Notes:
1. See QF product specification.
2. Other fiber lengths available upon request.