



LF Series

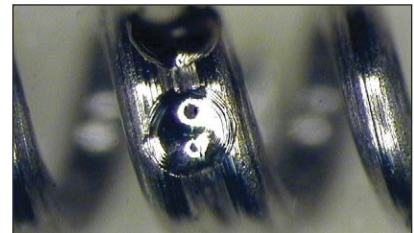
Fiber Laser Welders

The LF Series fiber lasers offer the precise control needed for small component welding and fine precision cutting of metals. A large touchscreen pendant enables clear visibility of process schedule parameters, and an intuitive interface enables quick and easy programming.

- Spot sizes down to 10 microns for thin metal welding
- Welding penetration depth beyond 0.16" (4 mm) in metals
- Excellent power stability for reliable results
- Simple, intuitive touchscreen user interface
- Safety: CE and CDRH certification, CAT3 safety circuitry

- **Integrated laser system** - Complete system with laser engine, controller, touchscreen interface and chiller (if necessary) integrated into chassis.
- **Micro welding** – The laser is available in either single-mode or multi-mode configuration. Precise control of the laser's pulse width and peak power enables fine micro welding processes. Penetrations up to 0.16 in (4 mm) in steels, titanium and nickel alloys are possible using continuous mode operation.
- **Spot and seam welding** – 20 segment pulse shaping enables best quality spot welding results. Ramp up and ramp down feature controls welding results at the ends of seam welds.
- **Excellent power stability** – Fine applications require high stability of the laser source for reliable processing. The LF Series offers excellent power and pulse to pulse stability with an internal air-to-water cooling mechanism which maintains stability irrespective of ambient air temperature.
- **Accessories** – Full range of focus heads including inline, 90 degree with process viewing via a camera, and through the lens illumination options. Galvo heads are also available. Ultra compact heads are also available if space is a premium.

TYPICAL WELDING APPLICATIONS



Medical spring attachment



Medical component assembly



Battery tab welding

TECHNICAL SPECIFICATIONS

Optical Parameters	
Parameter	Laser Specification
Wavelength	IR (1070 +/- 5 nm)
Operation mode	CW or modulated
Maximum output power	Up to 1000 W
Dynamic range	10%-100% of full power
Beam quality	Single-mode and Multi-mode (50 µm core*)
Positioning guide beam	On axis, built in visible laser (Class 3R)
Pulse modulation	Square pulse Up slope, down slope 20 segment pulse shaping

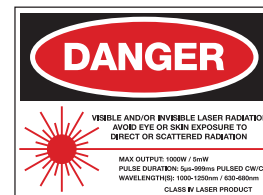
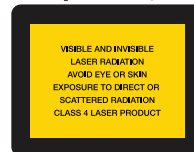
*Larger core diameters available upon request

Integration Parameters	
Parameter	Laser Specification
BDO (beam delivery optic)	QBH Fiber Termination
External communication	RS-232 / External I/O
Electrical	200-240 V ±10% single phase
Cooling	Integrated Chiller provided when needed
Operating temperature range	5-35°C for air-cooled models 5-40°C for water-cooled models
Operating humidity range	10%-85% (non-condensing)
Safety	Dual channel IEC13849-1 compliant
Fiber length	5 m (standard) - other lengths upon request
Certifications	CE, CDRH

WEIGHT & DIMENSIONS

Size W x D x H	20.1 in x 36.7 in x 41.4 in (511 mm x 933 mm x 1051 mm)
Weight	350 lbs (159 kg)

according to DIN EN 60825-1:10/2003



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