

WL-100A

Laser Workstation

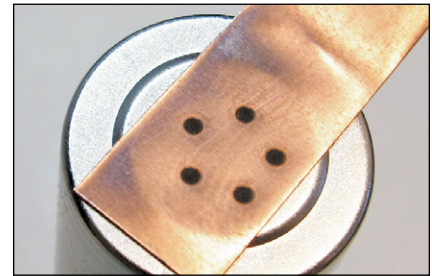


Pulsed fiber laser welders combine cutting-edge technology with industrial robustness for welding applications. This versatile series has numerous performance options to match the right laser to the application. Offering both OEM and integrated CDRH Class 1 solutions, AMADA WELD TECH provides a wide range of systems to meet your production demand. By simply changing the settings, this laser can even be used to mark welded parts. Owners of the LM-F Series also benefit from AMADA WELD TECH's commitment to providing industry-leading customer support.

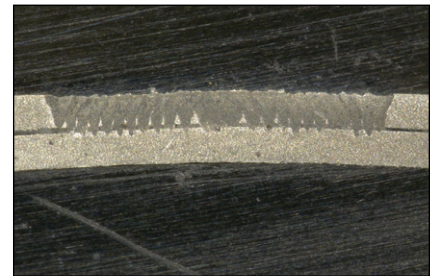
KEY FEATURES

- 20-70 W pulsed fiber laser welders
- High-power, high-speed lasers for welding metals, and plastics
- Welding of dissimilar materials: Cu to Al, Al to SS, Cu to SS, and more!
- Multiple integration options to match process needs
- Complies with IEC13849 – 1 category 3 PL,d safety circuitry with proper integration
- Unit comes with integrated stage controllers for up to 4 axes of motion, used for applications such as:
 - ▶ Step and repeat welding
 - ▶ Focal plane height adjust
 - ▶ Rotary welding
- Optional real-time laser weld monitoring to inspect the weld and ensure quality, throughput and traceability

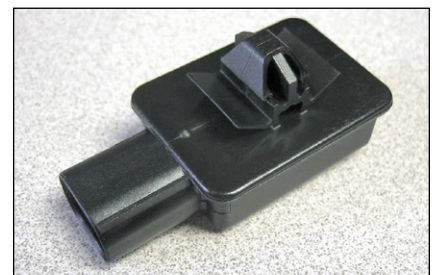
TYPICAL APPLICATIONS



Battery tab



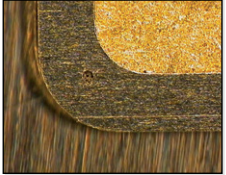


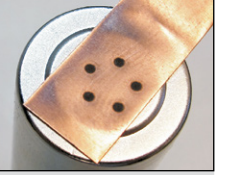
Cu-SS thin sheet weld



Plastic Weld

WELDER SELECTION GUIDE

AMADA WELD TECH offers a wide range of lasers to correctly match any welding application. The table below highlights the choices in laser power and typical applications for each laser.

LM-F020A-SM	LM-F020A-HP	LM-F035A-HP	LM-F070A-HP
20 W Precision Welding System	20 W Welding System	35 W Advanced Welding System	70 W Advanced Processing System
			
Precision Welding for Smallest Feature Size	Welding Metals and Plastics	Welding Plastics	Welding Metals

WELDING OPTIONS

- Galvanometric scanner, XY - standard
- XYZ and rotary stages (optional)
- Through the lens and off axis camera (optional)

WELD TYPES

- Single point object arrays
- Basic shapes: rectangle, circle, spiral
- Wobble function available for all weld types
- Vector graphics: CAD, line-drawings, logos

Accepted file types: .dxf, .cdr, and .ai

TECHNICAL SPECIFICATIONS

Parameter	Value		
AC power	Single Phase, 90-130 VAC/180-260 VAC, 50/60 Hz, 10 A		
Environment temperature	15° - 35° C (59° - 95° F)		
Environment humidity	Less than 90% RH (non-condensing)		
Cooling	Air cooled		
F-Theta Output Lens***	100 mm	160 mm	254 mm
Field Size	2.42 in x 2.42 in** (62 mm x 62 mm)	3.89 in x 3.89 in (99 mm x 99 mm)	6.18 in x 6.18 in (157 mm x 157 mm)
Working distance*	3.86 ± 0.04 in (98 ± 1 mm)	6.93 ± 0.08 in (176 ± 2 mm)	11.65 ± 0.12 in (296 ± 3 mm)
Lens diameter	3.54 in (90 mm)	3.54 in (90 mm)	4.72 in (120 mm)
Wavelength	1064 nm ± 5 nm		
Nominal power/ frequency range	LM-F020A-HP – 20 W / 2 - 500 kHz, CW LM-F020A-SM – 20 W / 2 - 500 kHz, CW (Single mode) LM-F035A-HP – 35 W / 2 - 500 kHz, CW LM-F070A-HP – 70 W / 2 - 500 kHz, CW		
Part size in enclosure	200 mm x 200 mm x 200 mm		
Guide laser	Diode 630 - 650 nm		

*Working distance is the distance from the focus point to the lens assembly. Error value of the working distance does not relate to the process depth of focus. **2.04 in x 2.04 in (52 mm x 52 mm) for 35 W version ***Other output lenses available upon request

according to DIN EN 60825-1:10/2003



WEIGHT & DIMENSIONS

	Controller	Microhead	WL-100A
Dimensions (L x W x H)	26.4 in x 17.0 in x 7.3 in (670.9 mm x 431.8 mm x 186.1 mm)	8.49 in x 3.03 in x 4.22 in (215.6 mm x 77 mm x 107.2 mm)	31.2 in x 17.4 in x 33.9 in (814.5 mm x 441.1 mm x 860.8 mm)
Weight	61 lbs (27.7 kg)	8.4 lbs (3.8 kg)	150 lb (68 kg)



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