40W Fiber Laser Welder NEW

ML-6040A

Air-cooling fiber laser welder for fine welding is released!

High peak power!
High power density!
High quality fine welding!

Features

- AMADA MIYACHI's own-developed high-quality fiber laser oscillator.
- Fewer heat-affected area.
- 40W average rated power and 80W peak power. Various workpieces from thin stainless steel foils to 100μm or less-thick plates layered can be welded.
- Suited for small-spot soldering.
- Φ50μm optical fiber enables high quality fine welding.
- Efficient fiber laser reduces environmental burden and CO2 emissions. (Power consumption is approximately 60% lesser than that of AMADA MIYACHI's lamp-pumped laser welder.)
- Long-life LD reduces maintenance cost.
- Fully air-cooled model, which is the first in AMADA MIYACHI's fiber laser welder series, reduces initial costs and running

Standard Features

- Real-time power feedback
- Waveform control
- Power monitor
- Color LCD touch panel
- External communications
- Fade-in/ Fade-out

costs.
- Power feedback feature.
- Built-in power monitor for better quality control.
- CDRH certified.

Applications

Electronic components, electric components, machine devices and medical equipment.

Specifications

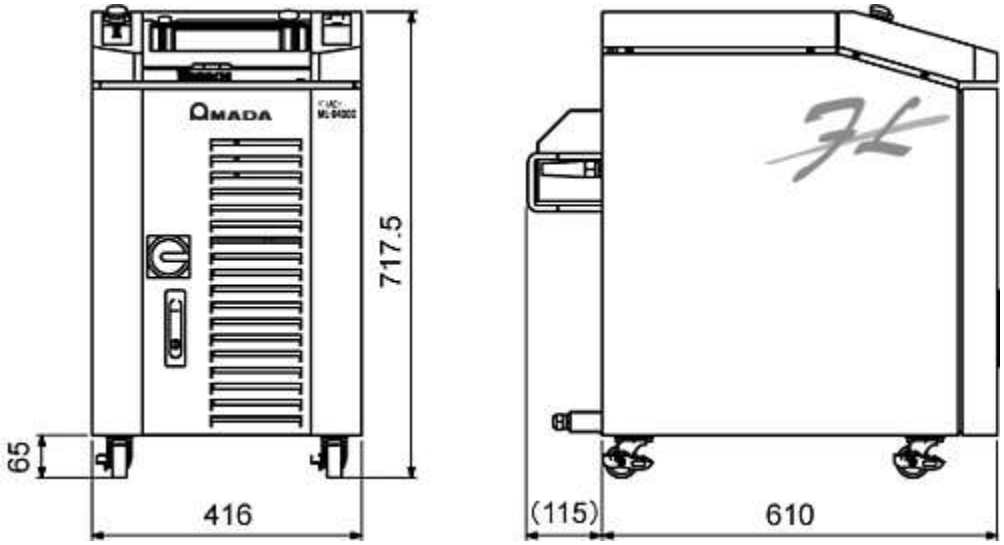
Model		ML-6040A
Maximum average power		40 W (Output from oscillator)
Maximum peak power		80 W (Output from oscillator) (3ms or less of pulse width for40.1 to 80 W)
Pulse width	REPEAT mode	Standard: 0.1 to 500.00 ms (0.1ms steps)
		Fine setting: 0.05 to 50.00 ms (0.05ms steps)
	CW mode	Standard: 0.1 to 1000.0 s (0.1s steps)
		Fine setting: 0.01 to 100.00 s (0.01s steps)
		1 to 10000 s (1s step)
Repeated number of pulse / modulation		1 to 1500 pps
Modulation function		1 to 1500Hz (Sine wave, triangle wave, square wave)
Oscillation wavelength		Fundamental wavelength
Safety shutter		With open / close sensor
Positioning guide beam		High-precision condensing LED
Output power stability		±2%p-p or less@5 W or more
Fiber optic delivery		Up to 2 deliveries of laser output, including powersharing,are available.
No. of programmable schedules		256
Measuring and monitoring		Laser energy (J), average power (W)
Counter	Total number of outputs	9 digits
	Number of acceptable outputs	9 digits
Power requirements		Single-phase, 100V to 240V AC (±10%), 50/60 Hz (±3%) (fully auto changeover)

Power consumption	1.1kW at max. (0.4kW while stand-by)
External communication function	RS-485
Heat exchange method	Forced air-cooled
Ambient temperature	0 to 35 °C
Ambient humidity	20%-80% RH
Dimensions	416(W) X 725(D) X 717.5(H)
Weight	72kg

*Specifications subject to change without notice.

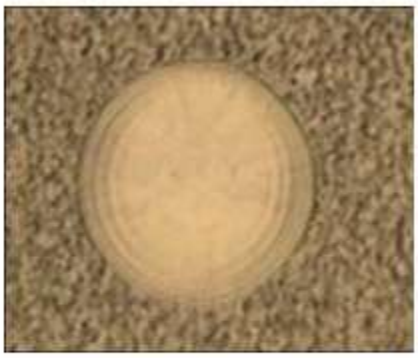
External View

■Dimensions in mm

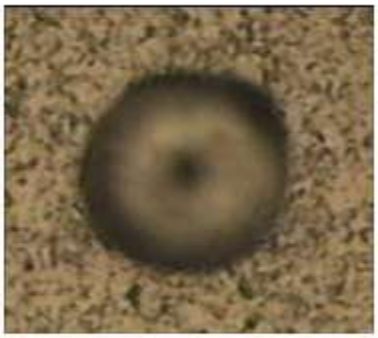


Sample

Nuggets on a surface and on a back side (Stainless steel, t=0.03mm×0.1mm)

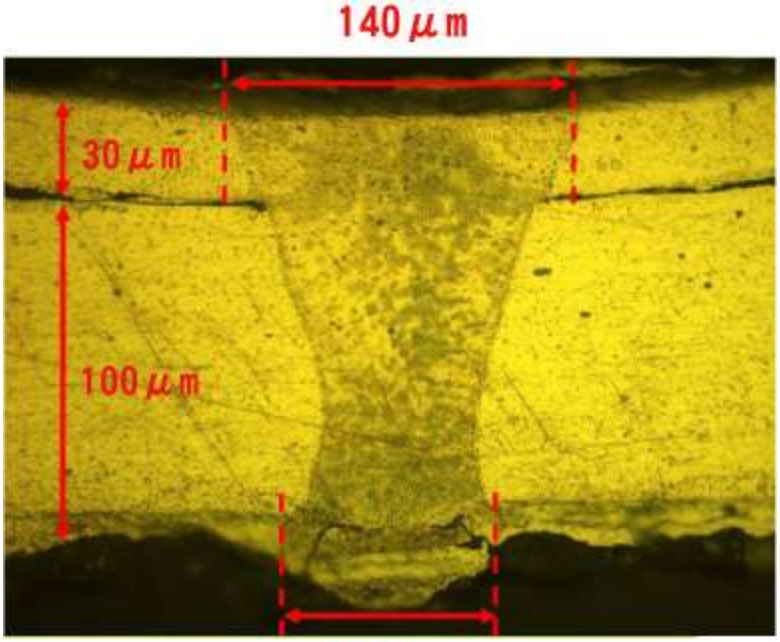


Clean nugget formation on a surface



Large nugget even on a back side proves solid welding

Cross section of a welded point (Stainless steel, t=0.03mm×0.1mm)



Ideal weld strength can be obtained.

(There is few difference in nugget diameter between the one on a surface and the other on a back side.)