

laser welding

LW300A/400A/500A/600A High Peak Power Pulsed Nd:YAG Laser Welders

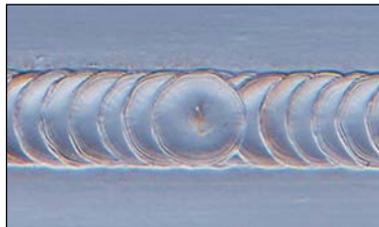
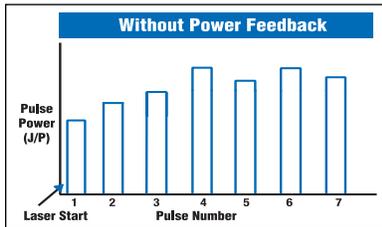
- Excellent Pulse-to-Pulse Power Stability
- 500 Hz Repetition Rate
- 300 Micron Core Fiber Delivery*
- Power Ramping and Pulse Shaping
- 300-600W Average Power
- Two-year warranty

The LW300A-600A Series lasers are specifically designed for high speed seam welding applications offering high peak power and pulse stability to meet virtually any production welding application.

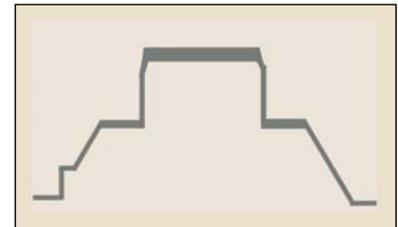
Each laser can be configured with up to four Time Share and four Energy Share outputs to match any application requirement; utilize one laser to support up to four workstations processing different parts with different weld schedules.



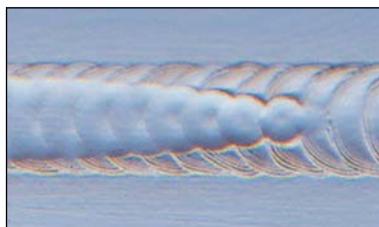
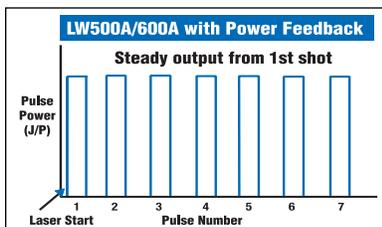
PERFORMANCE FEATURES



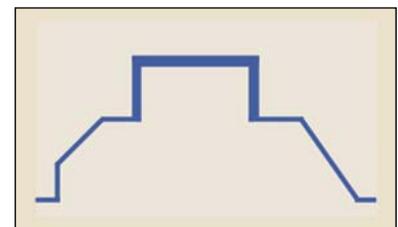
Without ramp-up/down power control function.



Programmable reference pulse shape.



With ramp-up/down power control function.



Actual laser shape.

Real-time Power Feedback for precise peak power control of pulse shaping and superior pulse-to-pulse stability

Seam Weld power ramping tapers power for optimal overlap and crack-free hermetic welds

Flexible Waveform Control for welding a wide range of materials

*Achievable on Model LW300A only

LW300A/400A/500A/600A SPECIFICATIONS

	LW300A	LW400A	LW500A	LW600A
Wavelength	1064nm			
Average Power	300W	400W	500W	600W
Pulse Energy @ 10mS	50J	70J	80J	100J
Peak Power	6.0kW	8.4kW	7.5kW	10.0kW
Pulse Width Range	0.25 to 99.9 mS			(≥5.0ms: 0.1ms/step) (<5.0ms: 0.05ms/step)
Repetition Rate	500Hz			
Pulse Shaping Feature	Yes			
Aiming Laser	Diode			
Number of Outputs	Up to 4			
Energy Share Outputs	One group of up to 4, or two groups of 2			
Time Share Outputs	Up to 4			
Fiber Core Diameter (SI or GI fibers)	0.3, 0.4, 0.6, 0.8, 1.0mm	0.4, 0.6, 0.8, 1.0mm	0.3, 0.4, 0.6, 0.8, 1.0mm	0.4, 0.6, 0.8, 1.0mm
Datacom	8/7 data, 2/1 stop bits, even/odd parity, RS485/422			
Power Requirements	220VAC +10%/-15%, 3 Phase, 50/60Hz			
Line Current	43A		84A	
Cooling Method	Water-Water			
External Cooling Water Requirements	4.2 gal./min. (16 liters/min) @86°F (30°C) 6.6 gal./min. (25 liters/min) @95°F (35°C) 1 bar (14.7 psi) minimum differential pressure 3 bar (44.1 psi) maximum inlet pressure		6.6 gal./min. (25 liters/min) @77°F (25°C) 14.5 gal./min. (55 liters/min) @90°F (32°C) 1 bar (14.7 psi) minimum differential pressure 3 bar (44.1 psi) maximum inlet pressure	
Cooling Water Inlet Diameter	0.591 inch (15mm)		0.748 inch (19mm)	
Ambient Operating Temperature	40 - 95°F (5 - 35°C)			
Humidity	85% non-condensing @ 77°F (25°C)			
Physical Dimensions H x W x D Inches (mm)	46.1 x 20.9 x 53.1 (1170 x 530 x 1350)		47.2 x 21.6 x 70.1 (1200 x 550 x 1780)	
Weight lbs. (Kg)	882 (400)		1191 (540)	
Special Features	CE certified units available: please consult factory			
BTU/Hr @ 100% Duty Cycle (Minimum Req.) (tons of cooling)	40,300 (3.5)		59,400 (5)	

WORKSTATIONS

Miyachi Unitek provides standard and custom system design and manufacturing including:

- CDRH Class I eye-safe enclosures with large windows for process viewing
- Configurable control panels with PLCs
- Interior lighting
- Multi-axis CNC motion components and tooling

Miyachi Unitek also has an advanced weld processing lab to assist customers with qualifying samples, developing robust weld processes and in selecting, characterizing, and optimizing materials, weld joint designs, tooling and part tolerances.



SW Workstation

Your Local Representative



Delta Series
Workstation



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