

laser welding

LW300A/400A/500A/600A

High Peak Power Pulsed Nd:YAG Laser Welders

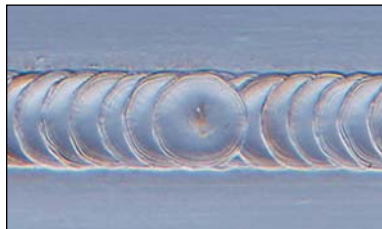
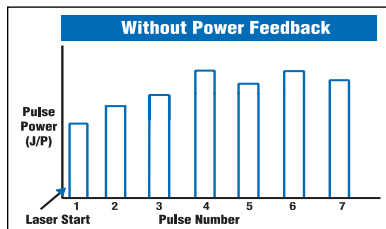
- Excellent Pulse-to-Pulse Power Stability
- 500 Hz Repetition Rate
- 300 Micron Core Fiber Delivery*
- Power Ramping and Pulse Shaping
- 300-600W Average Power
- Two-year warranty

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.

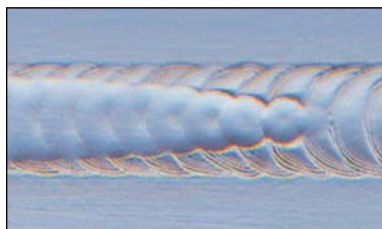
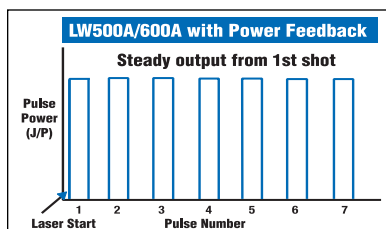
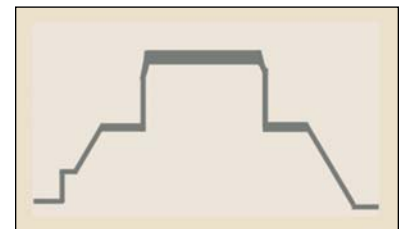
Each laser can be configured with up to four Time Share and four Energy Share outputs to match any application requirement; utilize one laser to support up to four workstations processing different parts with different weld schedules.



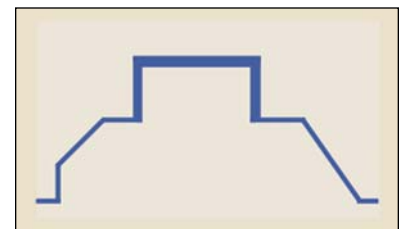
PERFORMANCE FEATURES



Without ramp-up/down power control function.



With ramp-up/down power control function.



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

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MIYACHI
UNITEK™

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) | 992 (450) | 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.



Your Local Representative

Spirit Of Innovation.
MIYACHI UNITEK™

Delta Series
Workstation



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