

A Series



Pulsed Nd:YAG Air Cooled Laser Welders LW5A – LW15A – LW25A



Photonic Components



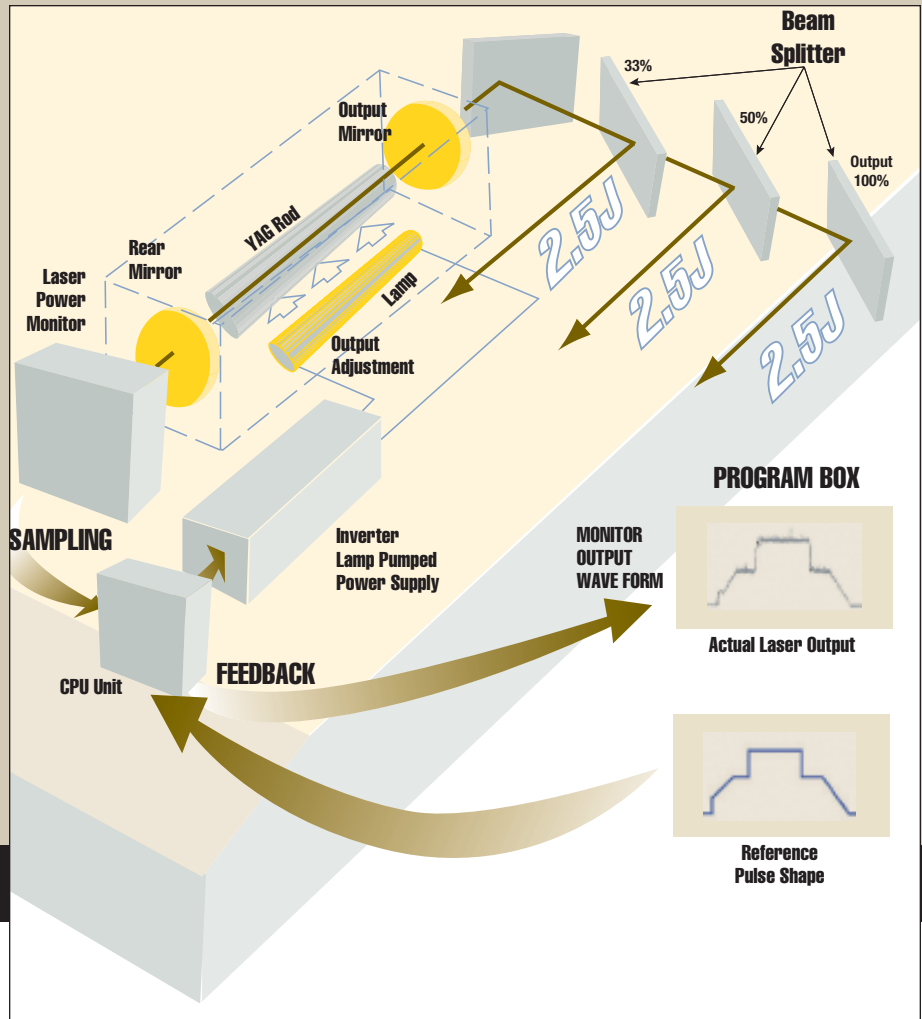
Catheter Guidewire Assembly



Disk Drive Gimbal

Welding Lasers: Ultimate Control – the Next Generation

Miyachi Unitek's new, ultimate control A-Series pulsed Nd:YAG lasers are designed specifically to meet the stringent demands of precision welding applications such as medical devices, photonic devices, and small or delicate components. These new lasers are the result of a two-year development effort, which has leveraged Miyachi Unitek's hands-on experience supporting the industry's foremost manufacturers of these components. These state-of-the-art lasers are air cooled, provide exceptional pulse energy and branch balance stability, and feature real-time power feedback, 20-segment pulse shaping, and up to three time-shared or three energy-shared fiber outputs.

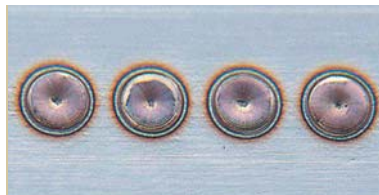


Real-Time Power Feedback

The real-time power feedback feature ensures extremely stable pulse-to-pulse energy stability which is essential for successful spot welding and process control over a broad range of materials. Laser pulses are programmed in instantaneous power which automatically compensates for flashlamp degradation, temperature variations and power changes due to thermal lensing, as well as other factors.



No Power Feedback



Power Feedback

Features

- Real time power feedback
- Exceptional branch balance stability
- 20 segment pulse shaping
- CDRH and CE approved
- Up to three time-share or energy-share outputs

20-Segment Pulse Shaping

The pulse shaping feature permits quick and easy optimization of robust laser weld schedules for a variety of materials and produces deep penetration welds with low weld splatter. Pulse shaping also helps to eliminate cracking in many

otherwise difficult-to-weld materials. With up to 20 programmable segments including steps and ramps, the A-Series lasers provide the ultimate control and flexibility in tailoring the laser welding pulse to meet robust laser weld process requirements and greatly extend the range of materials, platings and joint designs that can be successfully welded.



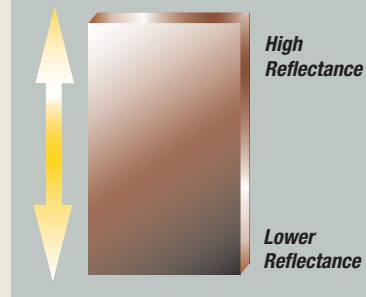
Advanced pulse program mode.



Standard pulse program mode.

Superior Branch To Branch Stability

VARIABLE MIRROR:
The reflectance can be adjusted by moving the mirror up and down.



For critical energy sharing applications, the new adjustable dichroic beam splitters, based on a patented ion-assisted deposition (IAD) fabrication technique, provide superior branch-to-branch energy balance under all conditions. This feature yields tight control over post weld shift in critical photonic device welding applications by providing precisely balanced laser pulse energy and weld nugget formation on every shot.

Full Service Support – A Partnership

Miyachi Unitek is the leading U.S. supplier of industrial lasers into the medical, photonics, and electronic component marketplaces. We have an unsurpassed reputation for providing outstanding service and support both before and after the sale. When you purchase a Miyachi Unitek laser, you enjoy the benefits of a long-term commitment to customer satisfaction and a partnership with Miyachi Unitek Corporation. Miyachi Unitek has almost 20 years' experience in laser technology and we transfer that knowledge to our partners with every system that ships from our facility:

Standard/custom system design and manufacturing including:

- CDRH Class I eye-safe enclosures
- Large windows for process viewing
- Configurable control panels with PLCs
- Interior lighting
- Base plates with pre-drilled tooling holes
- Internal AC power strips
- Multi-axis CNC motion components and tooling
- Configurable with all Miyachi Unitek lasers
- Applications development
- Process development support
- Installation and training

- Expert, worldwide 24/7 field service support
- Ask about our extended warranty and preventative maintenance plans



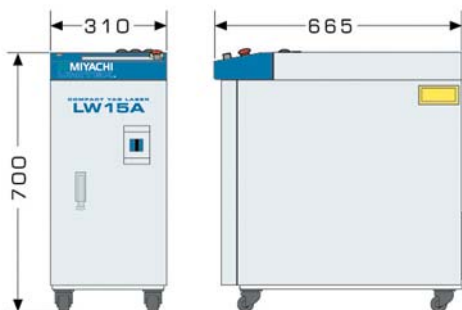
Specifications

Parameter	LW5A	LW15A	LW25A
Maximum Average Power	5 Watts	15 Watts	25 Watts
Maximum Pulse Energy	5J / 5.0mS	15J / 5.0mS	25J / 5.0 mS
Maximum Peak Power	2.5kW	4.0kW	6.0kW
Time Share Outputs		Up to 3	
Energy Outputs		Up to 3	
Pulse Width (Resolution)		0.2 → 10mS (0.02mS <5mS and 0.1mS ≥5mS)	
Repetition Speed		1 – 30pps	
Input Voltage		200/220/240 VAC +10%/-15%, 50/60 Hz, 1Ø	
Schedule Set		32 schedules	
Start Delay Time		1mS, 4mS, 8mS, 16mS selectable	
Schedule Change Time			
Ambient Temperature		41-86°F (5-30°C)	
Alarm for Lamp Life		Preset number of shots or input power value to lamp	
RS-485: type		Full duplex or half duplex	
baud rate		User defined, 9,600bps, 19,200bps or 38,400bps	
parity		Even, odd or no parity bit	
stop bits		1 or 2	
Cooling		Air cooled. No external water required.	
Time Share Shutter Speed		≤50mS	
Dust Proof Optics		Yes	

Physical Characteristics

Dimensions H x W x D Inches (mm)	27.2 x 12.2 x 26.2 (700 x 310 x 665)
Weight Lbs. (kg)	154 (70)

Compact Yag Lasers LW5A/LW15A/LW25A



Your Local Representative



Corporate Office: 1820 S. Myrtle Ave. • P.O. Box 5033 • Monrovia, CA 91017-7133 USA
 Tel: (626) 303-5676 • FAX: (626) 358-8048 • E-Mail: info@miyachiunitek.com
 Internet <http://www.miyachiunitek.com> • ISO 9001 Certified Company

EASTERN (USA)
 Sales Office:
 170 Cross Street
 Boylston, MA 01505
 Tel: (508) 869-0583
 FAX: (508) 869-0585
 E-Mail: eastsales@miyachiunitek.com

ASIA Sales Office:
 Unit D, 20/F, Infotech Centre
 21 Hung To Road
 Kwun Tong, Hong Kong
 Tel: +852 2833-6998
 FAX: +852 2833-6672
 E-Mail: asiapacific@miyachiunitek.com

UNITEK EAPRO (Europe):
 Schootense Dreef 21
 NL-5708 HZ Helmond
 The Netherlands
 Tel: +31 492-54-22-25
 FAX: +31 492-53-62-22
 E-Mail: info@unitekeapro.com

SOUTH AMERICA Sales Office:
 Av. Raimundo Pereira de Magalhães
 1720 – Edifício Via Fratelli, sl 163
 São Paulo – SP /Brazil 05145-200
 Tel/FAX: 55+ (11)3834.7245
 Mobile: 55+ (11) 8389.8490
 E-Mail: edson.urtado@miyachiunitek.com

MEXICO Sales Office:
 Pedro Rosales de Leon 7946-200
 Fraccionamiento Las Misiones
 Ciudad, Juarez, Chihuahua Mexico
 Tel: +52.656.623.2719
 FAX: +52.656.617.6058
 E-Mail: Jaime.morales@miyachiunitek.com

Specifications subject to change without notice.
 Copyright© 2007 Miyachi Unitek Corporation. The material contained herein cannot be reproduced or used in any other way without the express written permission of Miyachi Unitek Corporation. All rights reserved.