

Pulsed Nd:YAG Air Cooled Laser Welders

ML-2051A / ML-2050A / ML-2150A

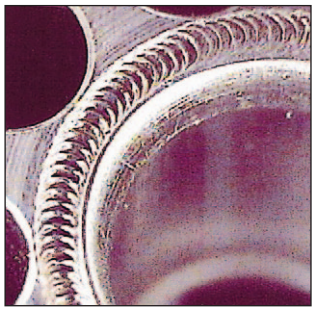
Our pulsed Nd:YAG lasers are designed to meet the stringent demands of precision welding applications including medical devices, photonic devices, and small or delicate components. They are the result of a multi-year development effort, which leveraged AMADA WELD TECH's hands-on experience supporting the industry's foremost manufacturers.

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.

KEY FEATURES

- Real time power feedback ensures the pulse-to-pulse energy stability which is essential for successful spot welding and process control
- Exceptional branch balance stability yields tight control over post weld shift in critical welding applications by providing precisely balanced laser pulse energy and weld nugget formation on every shot
- 20 segment pulse shaping permits quick and easy optimization of weld schedules for a variety of materials, produces deep penetration welds with low weld splatter and helps to eliminate cracking in difficult-to-weld materials
- Up to three time-share or energy-share outputs

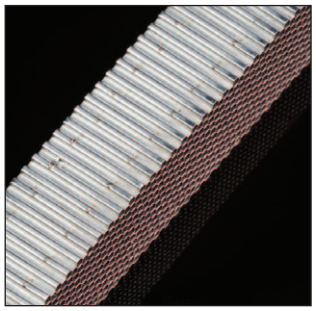
TYPICAL APPLICATIONS



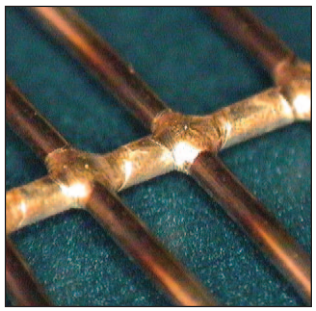
Auto valve laser application



High speed weld



Laser welding aerospace honeycomb



Small gauge wire welding

TECHNICAL SPECIFICATIONS

Parameter	ML-2051A	ML-2050A	ML-2150A
Maximum average power **Maximum pulse energy** **Maximum peak power**	5 Watts 5 J @ 5.0 ms 2.5 kW	15 Watts 15 J @ 5.0 ms 4.0 kW	25 Watts 25 J @ 5.0 ms 6.0 kW
Time share outputs	Up to 3		
Energy outputs	Up to 3		
Pulse width (resolution)	0.2 → 10 mS (0.02 mS <5 mS and 0.1 mS ≥5 mS)		
Repetition rate	1 - 30 pps		
Input voltage	200/220/240 VAC +10% / -15%, 50/60 Hz, 1∅		
Breaker rated current / recommended service	15 A		
Schedule set	32 schedules		
Start delay time **Schedule change time**	1 mS, 4 mS, 8 mS, 16 mS selectable		
Ambient operational temperature	41 - 86°F (5 - 30°C)		
Alarm for lamp life	Preset number of shots or input power value to lamp		
RS-485: type **baud rate** **parity** **stop bits**	Full duplex or half duplex 9,600 bps, 19,200 bps or 38,400 bps Even, odd, or no parity bit 1 or 2		
Cooling	Air cooled. No external water required.		
Time share shutter speed	≤50 mS		
Dust proof optics	Yes		

WEIGHT & DIMENSIONS

Controller dimensions (W x D X H)	12.2 in x 26.2 in x 27.2 in (310 mm x 665 mm x 700 mm)
Weight	154 lb (70 kg)



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