



532 nm Laser ML-8150A

AMADA WELD TECH's ML-8150A 5W laser welder offers weld speed (2.5x), penetration (~30%) and integration flexibility (2 energy- or time-share outputs). ML-8150A utilizes a 532 nm wavelength in the visible (green) spectrum which is better absorbed by highly reflective materials enabling precision micro-welding of gold and copper alloys and offering an efficient alternative for difficult to weld industrial applications that cannot be achieved with a traditional 1064 nm YAG laser.

KEY FEATURES

- Green laser beam in the visible spectrum is better absorbed by highly reflective materials enabling precision microwelding of conductive materials like gold and copper alloys
- Non-contact welding process
- Real time power feedback ensures extremely stable pulse-to-pulse energy stability
- Single phase power and air cooled; enables quick set-up and integration into current production line

TYPICAL APPLICATIONS



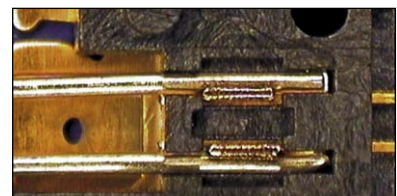
Welding 0.008 in thick copper terminals



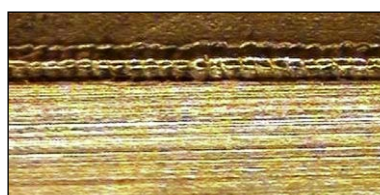
Semiconductor connections



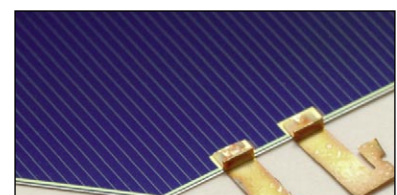
0.004 in diameter gold wire to gold pad



28 gauge gold coated copper wire to terminal



Aluminum to titanium seam weld

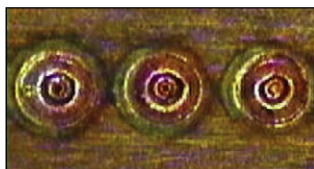


Solar cell

Comparison of welding copper with a standard 1064 nm Nd:YAG laser, and the ML-8150A at 532nm



1064 nm



532 nm

GREEN LIGHT ENABLES RELIABLE WELDING OF CONDUCTIVE MATERIALS

The 532 nm wavelength is absorbed much better and more consistently than 1064 nm providing reliable welding of conductive parts.

Material	1064 nm	532 nm
Copper	10%	55%
Gold	2%	58%

TECHNICAL SPECIFICATIONS

Green laser welder	ML-8150A
Input power	200-240 VAC Single Phase, +10% / -15%, 7 A, 50/60 Hz
Max. peak power	1.5 kW
Max. output power	5 W
Pulse width	0.20 - 5.00 ms (in 0.02 ms increments)
Pulse repetition rate	1 - 30 pps
Wavelength	532 nm
Positioning guide beam	Built-in (red)
Output stability	± 1.5% rms
Ambient temperature	5 to 30° C
Cooling	Air cooled
Schedules	Up to 32
Number of outputs	2

WEIGHT & DIMENSIONS

Dimensions W x D x H	16.9 in x 33.46 in x 32.3 in (430 mm x 850 mm x 822 mm)
Weight	264 lb (120 kg)



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