

Four point galvo sensors

MM-L400A
Laser Weld Monitor

The MM-L400A laser weld monitor helps to ensure weld quality and maintain high throughput by providing real-time feedback during the laser welding process to determine weld success.

MM-L400A works by detecting and recording 3 spectral ranges of light from the area of laser interaction during the welding process. The controller samples the signal and provides an output waveform around which envelope limits can be set.

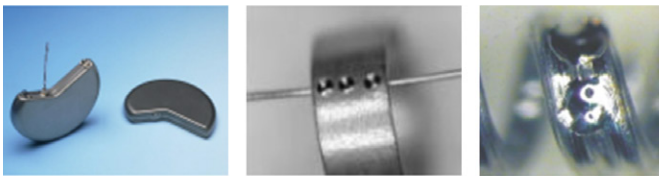
Laser weld monitor controller: MM-L400A

On/off axis sensor

KEY FEATURES

- Laser weld monitoring for CW and pulsed infrared lasers
- Detects infrared, reflected and visible (plasma) light
- The MM-L400A may be used to detect the following production errors depending on weld joint and conditions:
  - Gap between parts
  - Missing part
  - Out of focus
  - Absence of cover gas
- High temporal resolution (down to 1 µs)
- Envelopes allow real-time comparison and determination of good and bad welds

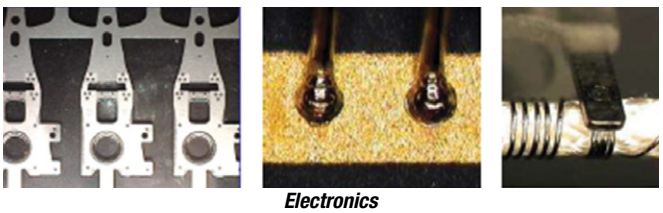
TYPICAL APPLICATIONS TO MONITOR



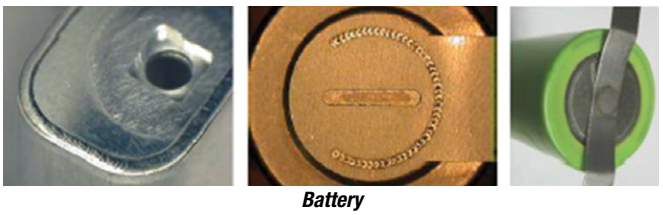
Medical devices



Automotive sub components



Electronics



Battery

CONFIGURATIONS



Off-Axis



Coaxial

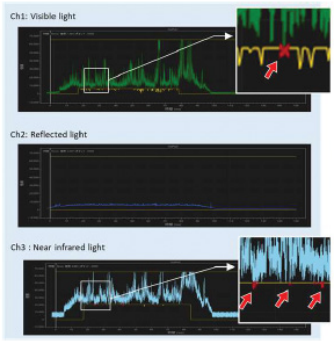


External mounting around the lens

SOFTWARE

The MM-L400A software operates in Microsoft Windows. Screens allow for easy configuration of sensor, set up of envelope limits, and analysis of the collected waveforms.





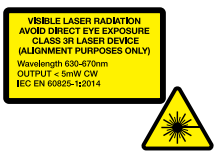
TECHNICAL SPECIFICATIONS

Model		**MM-L400A Controller**
Input power requirements		Single phase, 100 – 220 VAC 50/60 Hz
Temporal resolution		Min: 1 µs Max: 1 ms
Judgment function	**Analysis**	Waveform
	Judgment	Upper and lower limit, integral
Operational temperature range		5° C – 40° C (non-condensing)
Operational humidity range		<85% RH (non-condensing)

Model	**Coaxial or Off-axis LRU**	**Galvo LRU**
Working Distance	7.85 in (200 mm)	7.09 in (180 mm)
Monitoring area	0.08 in (ø 2 mm)	3.54 in x 3.54 in (90 mm x 90 mm)
Guide light	Green LED	
Monitoring wavelengths	Visible light: 400 to 800 nm, Reflective light: 1060 to 1080 nm, Near-infrared light: 1300 to 1700 nm	
Operational temperature range	5° C – 40°C (non-condensing)	
Operational humidity range	<85% RH or under (non-condensing)	

WEIGHT & DIMENSIONS

	MM-L400A without connector
Dimensions (W x D x H)	19.1 in x 23.5 in x 4.3 in (486 mm x 597 mm x 109 mm)
Weight	48.5 lb (22.0 kg)





USA Headquarters and Western Technical Center
AMADA WELD TECH
1820 S. Myrtle Ave. • Monrovia, CA 91016 US • T: (626) 303-5676
info@amadaweldtech.com • www.amadaweldtech.com
ISO 9001:2015 Certified Company • 24/7 Repair Service: 1-866-751-7378

AMADA WELD TECH
(Eastern Technical Center)
High Point, North Carolina
T: (941) 544-5762
southsales@amadaweldtech.com

AMADA WELD TECH
(Midwest Technical Center)
Detroit, Michigan
T: (248) 313-3078
midwestsales@amadaweldtech.com

AMADA WELD TECH GmbH
Puchheim, Germany
T: +49-89-839403-0
infode@amadaweldtech.eu

AMADA WELD TECH SHANGHAI CO., LTD.
Shanghai, China
T: +86-21-6448-6000
jwu@amadaweldtech.com.cn

AMADA WELD TECH KOREA CO., LTD.
Seoul, Korea
T: +82-31-8015-6810
sales@amadaweldtech.co.kr

AMADA TAIWAN CO., LTD.
Taipei, Taiwan
T: +886-3-328-3511

AMADA (THAILAND) CO., LTD.
Bangkok, Thailand
T: +66-2170-5900
info@amada.co.th

AMADA VIETNAM CO., LTD.
Ha Noi, Vietnam
T: +84-24-6261-4583
thuyet@amada.co.jp

AMADA WELD TECH INDIA PVT., LTD.
Bangalore, India
T: +91-80-4092-1749
info@amadaweldtech.in

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