

■ 10W YVO₄ Laser Marker



ML-7111A

Operation has been improved
much easier!

Features

- Very small focused laser beam is suitable for precise welding.
- No maintenance as cooling water, filter, and etc, according to electronic cooling method.
- Seven lenses to choose from in accordance with applications.

Standard Features

YVO ₄	☐
Automatic backup function	☐
Single mode laser	☐
Fully air-cooled	☐
LMDraw6	☐
Saving maintenance	☐
Guide beam	☐
Image processing laser marker	☐



2D code marking

2D codes



QR code



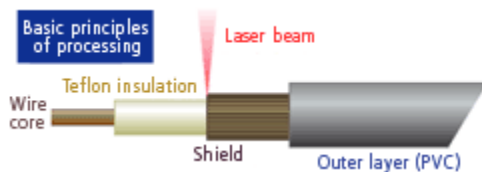
Data matrix

Marking is possible in spaces within 1mm x 1mm or smaller.
Great improvement in operability and functionality.



Operability using a PC with LMDraw has been greatly improved! The screen configuration makes operations easy for even beginners to understand and allows advanced users to make detailed settings easily from the menu.

Shield cutting



Enables for noncontact cutting of coaxial cable's shield that had processed by only cutter.

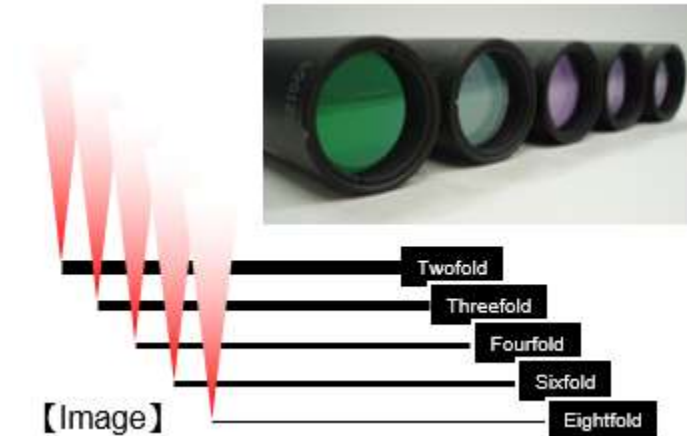
Fine, high-quality, and high-precision

Output stability and peak power output in the Q switch high-frequency area is so great that it is suitable for high-quality marking on electronic parts and fine processing of metals.

Various exp lens and f θ lens to change processing area and beam size.

■ **Beam expander**

To arrange marking width and engraving depth.

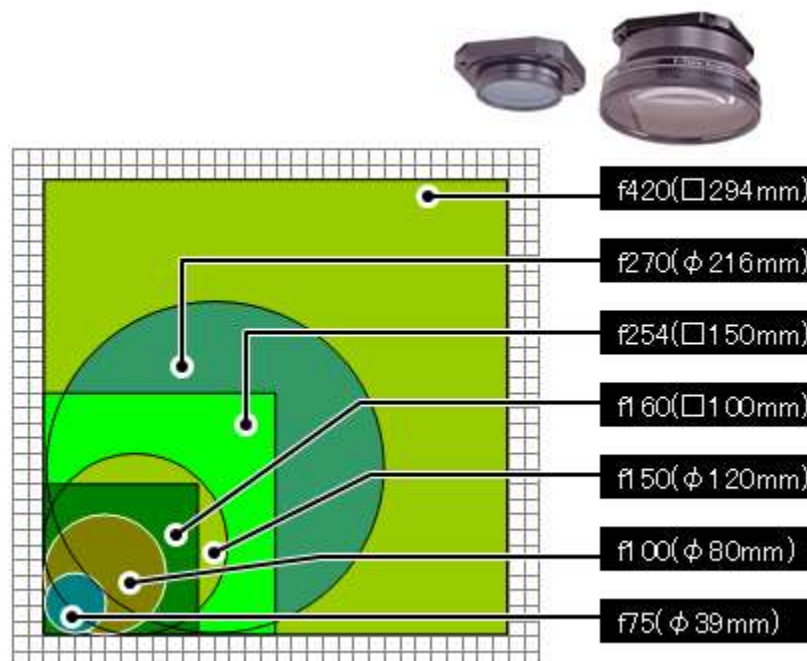


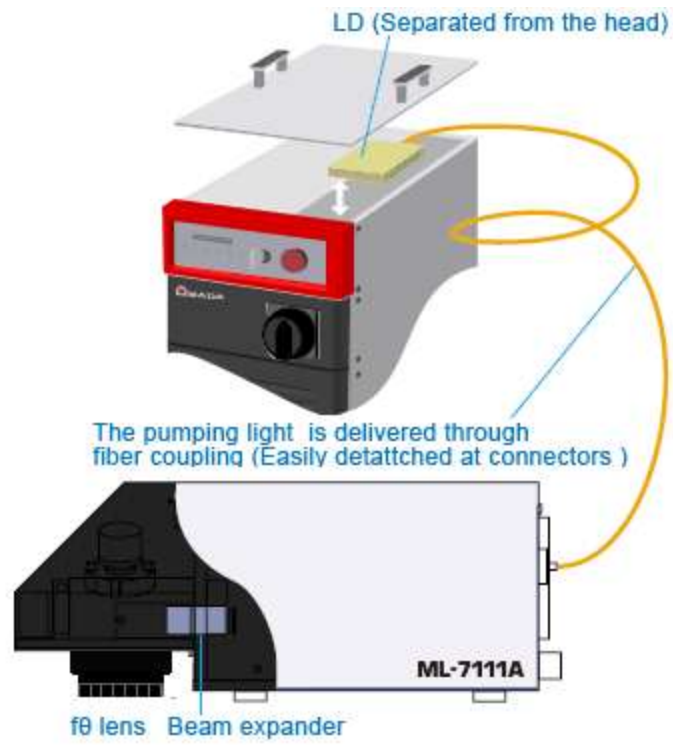
*Sample test is required prior to placing the order.

Processing condition or configuration of products must be confirmed with us for your specific applications.

■ **F θ lens**

You can change the marking area





Specifications

f θ lens list

f θ lens	F75	F100	F150	F160	F254	F270	F420
Scanning method	Galvanometer scanner						
Marking area (mm)	Φ39	Φ80	Φ120	□100	□150	Φ216	□294
Working distance (mm)	93	110	170	175	299	313	494
Position resolution (μm) *1	1	2	2	2	3	4	6
Marking speed (mm/s) *2	0.01 to 5,000	0.01 to 7,000	0.01 to 10,000	0.01 to 11,000	0.01 to 17,000	0.01 to 18,000	0.01 to 28,000

*1: Computed value. Not the actual position accuracy.

*2: Computed value. Confirm the appropriate speed for marking during actual marking operations.

Specifications

Model	ML-7111A
Laser type	YVO ₄ Laser
Oscillation wavelength	1,064nm
Oscillation mode	Single mode
Maximum output	10W (CW mode)
Oscillation type	Q Switch pulse oscillation and continuous-wave oscillation
Pulse frequency	0.1k to 199.9kHz
Guide beam	Red LD laser

External communication terminals	USB1.1 (full speed), RS-232C (Optional), and compact flash card
Cable length bet. Head and control unit	3m, 5m, 8m, 10m (Purchase choice)
Cooling method	Fully air cooled
Power supply	Single-phase: 100-240 V AC - 10%/+6%, Auto switching: 50/60 Hz
Power consumption	550W or less
Marking software (PC) *1	LMDraw6 (Windows 7 Professional 32/64 bit Japanese/English version(SP1), or Windows 8.1 32/64 bit Japanese/English version)
Font	TrueType font, DIN30640, JIS Z 8905, JIS Z 8904, JIS Z 8903, OCR-A, OCR-B, Round hand
Marking characters	Alphabet, Number, Katakana, Hiragana, Chinese character (JIS Z 8903), Symbol
Supported file formats	DXF (AutoCAD 2006 version or earlier), BMP, JPEG, GIF, TIFF
Code types *2	Code39, Code128, ITF, Data matrix, QR code, Micro QR code
Ambient temperature	5 to 35 °C (non-condensing and non-freezing)
Ambient humidity	40 to 80% RH (non-condensing and non-freezing)
Mass	<Control Unit>: approx. 24kg <Head Unit>: approx. 13kg <Operating Unit (Not included)> 2.8kg

*1 Windows is a registered trademark and a product of Microsoft, Inc.

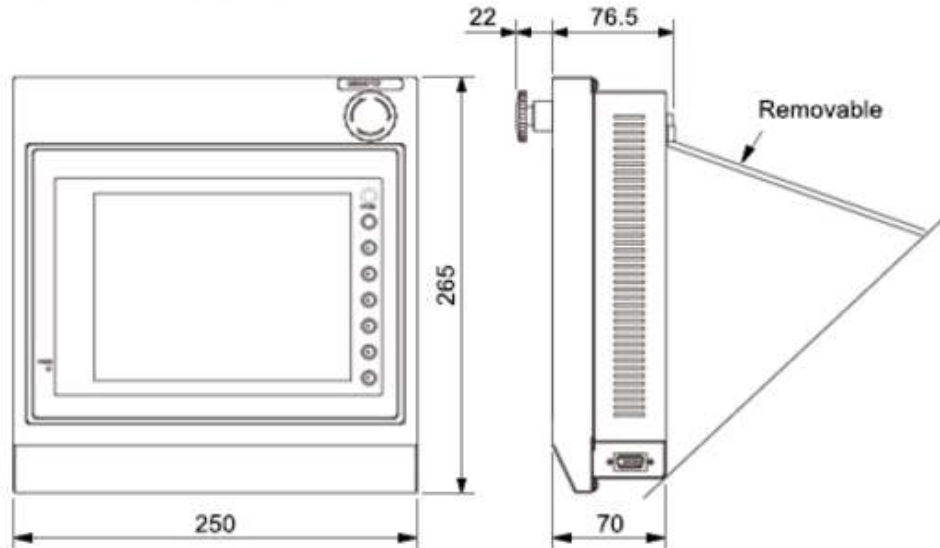
*2 Data Matrix is a registered trademark and a product of International Data Matrix, Inc. QR code is a registered trademark and a product of Denso Wave Co., Ltd.

* Specifications are subject to change without notice.

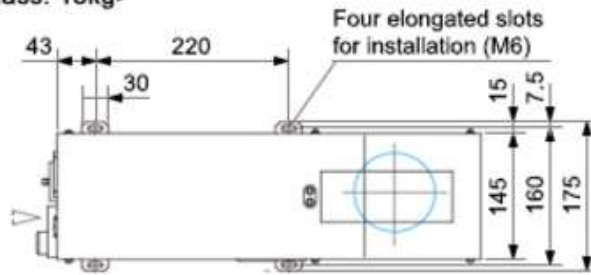
External View

■Dimensions in mm

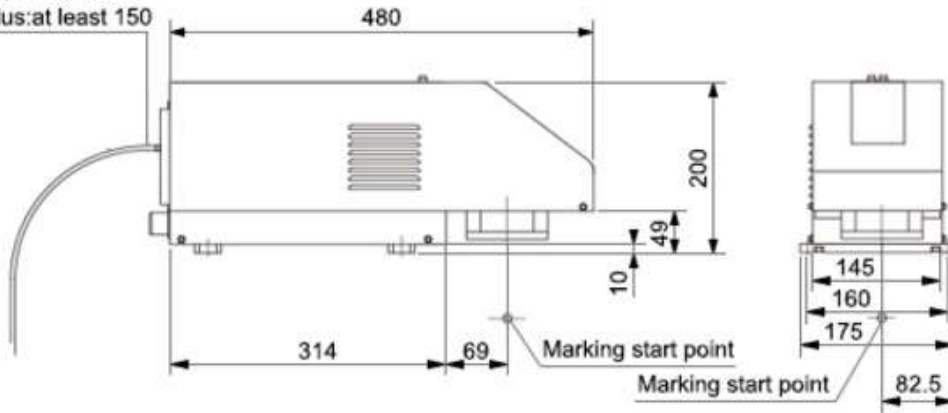
Operation unit (option) <Mass: 2.8kg>



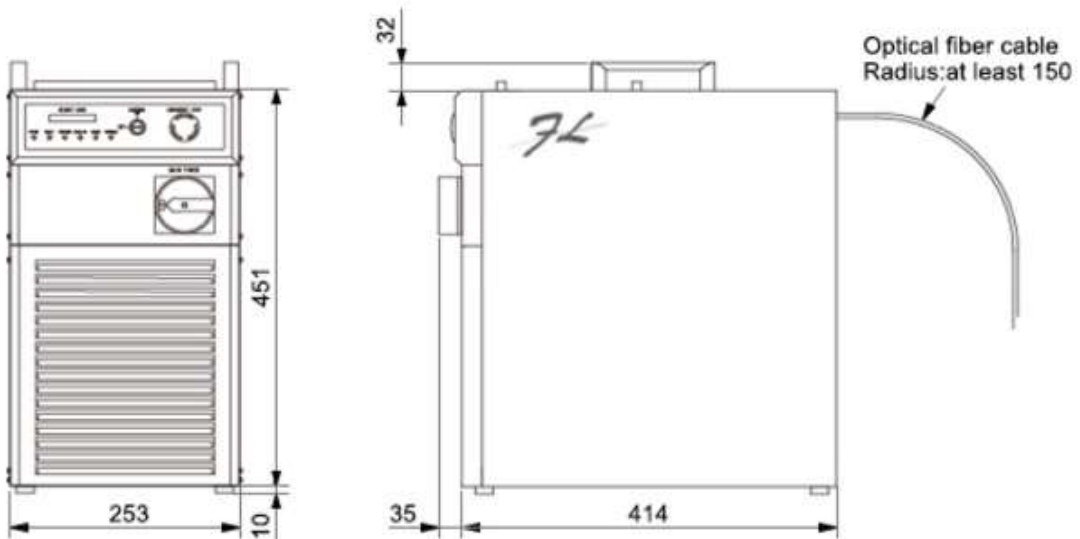
Oscillator <Mass: 13kg>



Optical fiber cable
Radius: at least 150



Control unit <Mass: 24kg>



Sample



Abration of illuminating switches



Marking of serial numbers