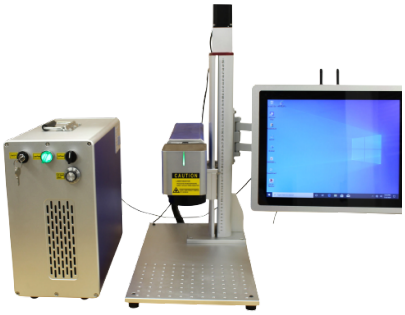
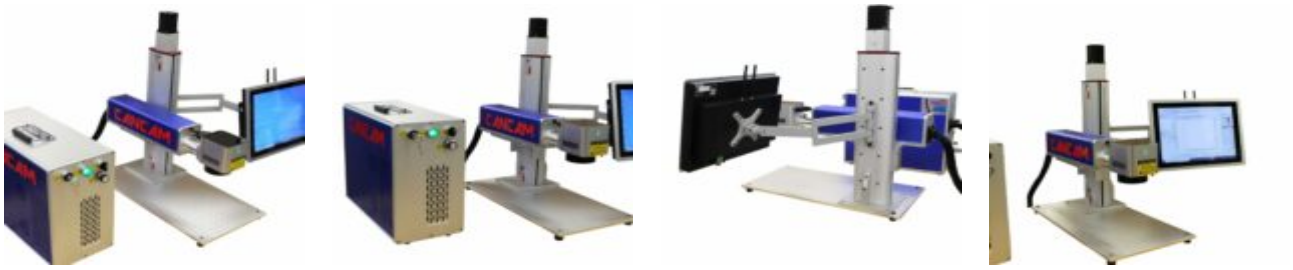
OP-FML

Open Fiber Marking Laser





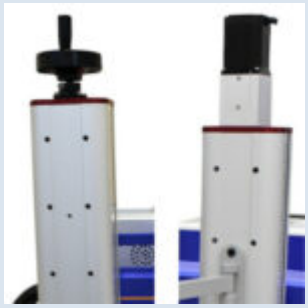
The OP-FML is a (open frame fiber marking laser system) that is designed to be stationary and offers high precision even in high volume operations at powers as high as 100 watts with minimal down time. This design allows for larger pieces to be places underneath the galvo scanner with the press of a button due to the built in Z axis motor.

Description

The minimalist design makes it easy to mark/engrave on large metal stainless steel and anodized aluminum surfaces with ease, to name a couple. This unit features an easy to use touchscreen PC with windows and wifi along with the start/stop foot pedal. The OP-FML operates with a solid state 1064nm fiber laser and easily upgradable for rotary operations on curved surfaces as well as other accessories. The fiber metal engraving laser is built to serve with very little maintenance and zero consumables. You can expect up to 100,000 working hours on this machine!

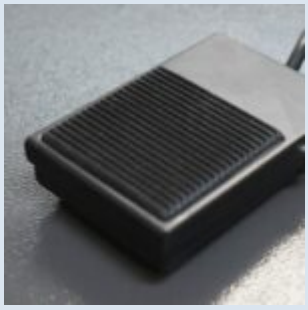
Product Feature

Touch Screen PC
Windows touch screen computer with wifi.

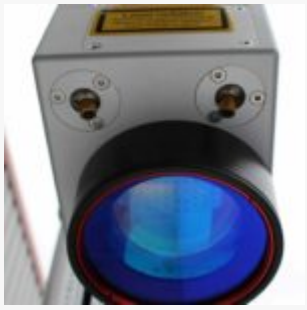


Manual or Motorized Z axis
Choose between a manual or motorized Z axis.

Accessory attachment plug
The fiber marking laser is outfitted with an accessory plug and a spare stepper motor driver so that you can add a rotary lathe, 4 wheel rotary, circular rotary etc.



Foot pedal start/stop
For repetitive work you can use the foot pedal to assist you without touching the computer or mouse.



Marking results for colors
MOPA can have a frequency range of 1.6 kHz – 4000 kHz.
This large amplitude enables MOPA lasers to have different engraving results over plastic and metal materials.
Compared to the old Q-switch laser source which only allows the power supplies to generate path light between 1 – 500kHz, MOPA technology, can generate 1 – 2700kHz or more.
By controlling the pulse width, different marking result colors can be created in MOPA fiber lasers.

High resolution
For example, the narrow pulse width can create more powerful laser beams, while longer pulse widths can create more detailed images.

MOPA laser scanner (Master Oscillator Power Amplifier)
With the use of the MOPA technology in our fiber marking lasers you will achieve a better quality aesthetic appearance
with the small pulse width parameters, it minimizses the risk of deforming material, and the shading is more delicate and bright.
Another benefit of the MOPA laser technology is fine shading with deep marking on metal.
This is due to the MOPA laser's use of small pulse width parameters that allow the laser to stay in the material for a shorter period of time
Mopa can also work well with Anodized Aluminium unlike Q-switched laser technology.

Material uses
A MOPA fiber laser can engrave on aluminum (black-engrave), brass, acrylic, nickel, carbon steel, stainless steel (color-engrave), chrome, carbide, tungsten, iron, silicon, gold, titanium, silver, other precious metals, plastic, and more.

Physical Features

Specification	MM	INCH
Marking Area	110mmx110mm	110mmx110mm
Marking Area (Options)	150x150mm/175x175mm/200x200mm/220x220mm/250x250mm/300x300mm	150x150mm/175x175mm/200x200mm/220x220mm/250x250mm/300x300mm
Horizontal Processing Envelope	Max 300x300mm	Max 300x300mm
Fume Port Size	N/A	N/A
Fume Extractor CFM	N/A	N/A
Machine Footprint	600x305x700mm	600x305x700mm
Electrical Cabinet Size	450x210x390mm	450x210x390mm
Net Weight	50kg	50kg
Gross Weight	53kg	53kg
Crate Size	780x400x800mm	780x400x800mm

Power

Specification	MM	INCH
Voltage	110v	110v
Optional Voltage	N/A	N/A
Power Requirement	600W	600W

Laser Power Source

Specification	MM	INCH
Frequency Range 1-600kHz	MOPA LP	MOPA LP
Frequency Range 1-4000kHz	MOPA M7	MOPA M7
Laser Classification	Class 4 laser products, as defined in International Standard IEC 60825-1	Class 4 laser products, as defined in International Standard IEC 60825-1

Laser Power Specifications

Specification	MM	INCH
Laser Power		
30W (Option)	30W (Option)	30W (Option)
40W (Option)	40W (Option)	40W (Option)
50W (Option)	50W (Option)	50W (Option)
100W (Option)	100W (Option)	100W (Option)
Wavelength	1064nm	1064nm
Laser Classification	Class 4 laser products, as defined in International Standard IEC 60825-1	Class 4 laser products, as defined in International Standard IEC 60825-1

Computer Software

Specification	MM	INCH
Recomended	Windows	Windows

Controller Interface

Specification	MM	INCH
	EZCad	EZCad
(Option)	Lightburn	Lightburn

Computer

Specification	MM	INCH
(Option)	Windows PC with 15" Touch screen	Windows PC with 15" Touch screen
Inputs for touchscreen PC	HDMI, USBx4, Ethernet, audio, VGA	HDMI, USBx4, Ethernet, audio, VGA
Wifi	Yes	Yes

Performance

Specification	MM	INCH
Positioning Accuracy	0.005mm	0.005mm
Max Scanning Precision	0.005mm	0.005mm
AutoFocus	No	No
Red Dot Positioning	Yes	Yes
Scan Speed	7000mm/s	7000mm/s
Minimum Font Size	1mm	1mm