



405nm-642nm Line Laser Modules for Machine Vision, 5-12VDC, Dia. 12mm

MVEB Series



Overview

The Lasermate MVEB series laser diode module is a line laser module designed for applications that require a wavelength in the 405nm to 642nm spectral range. The laser module is powered by an OEM version 5-12V PCB and constructed with features of uniform power density, high straightness, and good stability line beam. With its industrial-suited design and stable performance, the laser is the ideal solution as an integrated module in collimation, laser medical treatment, scientific experiment, optical instrument, and many other applications.

Features

- Wavelength range: 405-642nm
- Diameter: Φ 12 mm
- Ultra-compact design and easy operation
- Low cost
- Supply voltage 5-12VDC

Applications

- Collimation
- Laser medical treatment
- Scientific experiment
- Optical instrument

Specifications (T_{op} = 25°C)

Part Number	MVEB405-100F12-Lx	MVEB635-80F12-Lx	MVEB637-80F12-Lx	MVEB640-80F12-Lx	MVEB642-80F12-Lx
Wavelength (nm)	405	635	637	640	642
Wavelength tolerance (nm) typical	±5	±5	±5	±5	±5
Output power (mW)	~100	~80	~80	~80	~80
Linewidth at <250mm	40-200um				
Linewidth at 1m	<1.0mm				
Fan angle	7° (x=7), 10° (x=10), 15° (x=15), 30° (x=30), 45° (x=45), 50° (x=50), 60° (x=60), 75° (x=75), 90° (x=90)				
Laser operation mode	CW				
Expected lifetime (hrs)	10,000				
Operating voltage	5-12V DC				
Connection	Cable with flying leads				
Operating temperature (°C)	-10 to +45				
Storage temperature (°C)	-20 to +80				
Humidity	<90%, non-condensing				
Dissipated heat (W)	<1W				
Weight (g)	20g				
Length (mm)	52mm				
Diameter head (mm)	12mm				
Material	Aluminum				

Note: If the standard output power is too high for your applications, we can supply you a lower output power version. Please let us know the maximum or the range of output power needed.

Outline Dimensions (unit: mm)**Additional Notes**

- The MVEB series laser modules are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Additional heat sink may be needed if the laser module is operated continuously for a long period of time.
- Specifications are subject to change without notice.

Accessories

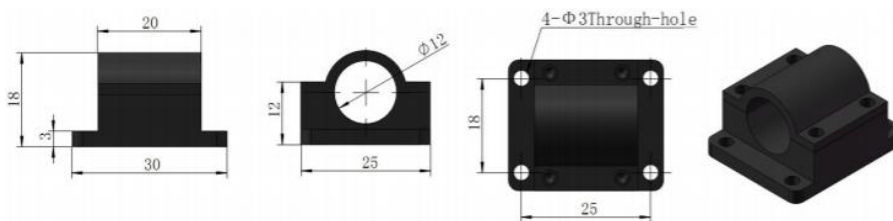
Module Mount

The module mount acts as a combined heat sink mount for 12mm diameter diode modules. To install, loosen the four small set screws and remove the top half of the module mount to put the laser in. The laser is held firmly by tightening the screws. The module mount reserves 4 through-holes for the user to fix the laser on a flat and thermally dissipating surface.

Mount Specifications

- Module mount size: 30mm x 25mm x 18mm
- Applicable models diameter size: 12mm
- Through-hole diameter: 3mm
- Through-hole distance: 25mm x 18mm

Outline Dimensions of Mount (unit: mm)



Connector

- USB connector: suitable for access to computer control
- Bayonet nut connector: to minimize distractions
- Headset connector: easy to connect and disconnect

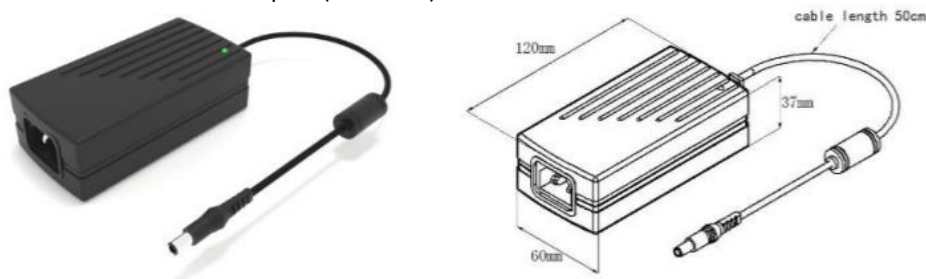
Power Adapter

The universal laser diode module power supply with CE-marking provides a well-regulated 5VDC. The auto-ranging power module can be connected to any 85-264 VAC 47/63 Hz supply. There is an IEC 60320 input socket and a 0.5m output cable terminated with an easy connect/disconnect jack socket. The headset connector is compatible with the power supply jack.

Specifications

- Input voltage: 85-264V AC 47/63Hz
- Output voltage: DC 5V 5A
- Adapter size: 120mm x 60mm x 37mm
- Adapter cable length: 0.5m
- Cable connector: Easy connect/disconnect jack

Dimensions of Power Adapter (unit: mm)





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