



405nm-808nm Line Laser Modules for Machine Vision, 5VDC, Dia. 19mm, Focus Adjustable

MVEE Series



Overview

The Lasermate MVEE series laser diode module is a line laser module designed for applications that require a wavelength in the 405nm to 808nm spectral range and output power up to 180mW. The laser module is photoelectric integrated, and constructed with features of easy integration, high reliability, focus adjustable, and good environmental adaptability. With its high reliability and stable performance, the laser is the ideal solution for applications in 3D scanning and measurement, position welding, dimensional inspection, etc.

Features

- Wavelength range: 405-808nm
- Diameter: Φ 19 mm
- Fine focusing
- Output power up to 180mW
- TTL or Analog modulation up to 10kHz
- Adjustable focus

Applications

- 3D scanning
- Measurement
- Position welding
- Dimensional inspection

Specifications (T_{op} = 25°C)

Model Number	MVEE405- XA5-LY	MVEE520- XA5-LY	MVEE637- XA5-LY	MVEE660- XA5-LY	MVEE785- XA5-LY	MVEE808- XA5-LY
Wavelength (nm)	405	520	637	660	785	808
Wavelength tolerance (nm) typical	±5	±5	±5	±5	±10	±10
Output power (mW)	~50 (X=50), ~100 (X=100), ~150 (X=150), ~180 (X=180)	~30 (X=30), ~50 (X=50), ~80 (X=80)	~50 (X=50), ~100 (X=100), ~150 (X=150)	~50 (X=50), ~100 (X=100), ~150 (X=150), ~180 (X=180)	~30 (X=30), ~50 (X=50), ~100 (X=100)	~30 (X=30), ~50 (X=50), ~100 (X=100)
Linewidth at <250mm	40-200um					
Linewidth at 1m	<1.0mm					
Line angle	7° (Y=7), 10° (Y=10), 15° (Y=15), 30° (Y=30), 45° (Y=45), 50° (Y=50), 60° (Y=60), 75° (Y=75), 90° (Y=90)					
Working distance (mm)	5-2000 (adjustable)					
Laser operation mode	CW					
Luminance uniformity	80%					
Straightness error	Less than 0.5%					
Temperature and power stability	Less than 0.5%					
Expected lifetime (hrs)	10,000					
Operating voltage	5V DC					
Current (max)	300mA					
Modulation	TTL modulation; Analog input adjusting power					
Modulation frequency	TTL up to 10kHz; Analog up to 10kHz					
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					
Length (mm)	109mm					
Diameter head (mm)	19mm					
Material	Aluminum					

Outline Dimensions (unit: mm)



Additional Notes

- The MVEE 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

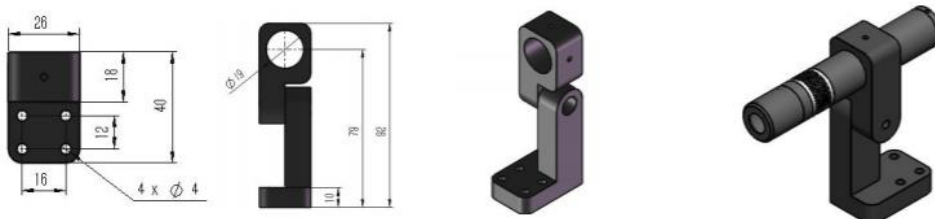
Module Mount

The module mount is used for 19mm diameter diode modules. To install, loosen the two 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 base reserves 4 holes for the user to fix the laser on a flat and heat-dissipating surface. Moreover, the module mount can be tilted about 45°.

Mount Specifications

- Module mount size: 40mm x 26mm x 92mm
- Applicable models diameter size: 19mm
- Mounting hole diameter: 4mm
- Mounting hole distance: 16mm x 12mm

Outline Dimensions of Mount (unit: mm)



Connector

- USB connector: Suitable for access to computer control
- Headset connector: Easy connect and disconnect

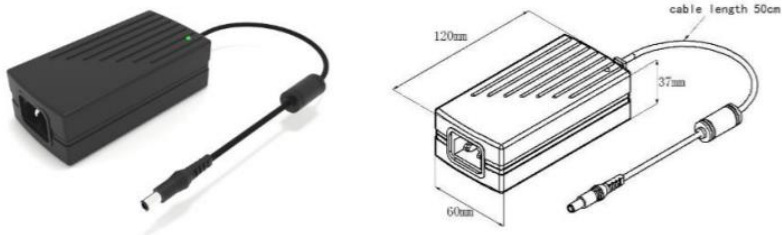
Power Adapter

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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