

## ***MDL-SL/MDL-L Series Laser Module***



### ***MDL-SL/ MDL-L Series Laser***

#### ***Module***

The MDL-SL Series Laser is powered by an external OEM Version 5V or 5-30V PCB and MDL-L Series Laser is photoelectric integrated. They are made features of easy integration, high reliability, focus adjustable, good environmental adaptability.

The user can choose from IR, red, green, blue or violet wavelengths depending on the application and material to be inspected.

MDL-SL/ MDL-L Series Laser Module with its stable performance and high reliability works professionally in 3D scan and measurement, position welding and dimensional Inspection, etc.

### ***FEATURES***

- Output power up to 180mW
- Wavelengths from 405 to 1550nm
- TTL modulation up to 10kHz
- Analog modulation up to 10kHz
- Focus adjustable

### ***APPLICATIONS***

- 3D scan and measurement
- Position welding
- Dimensional Inspection

**SYSTEM SPECIFICATION\***

Wavelength	nm	<b>405</b>	<b>450</b>	<b>520</b>	<b>635-660</b>	<b>808</b>	<b>830-1550</b>
Wavelength tolerance	nm (typical)	<b>±5</b>	<b>±5</b>	<b>±5</b>	<b>±5</b>	<b>±10</b>	<b>±10</b>
Output power	mW	<b>1-180</b>	<b>1-80</b>	<b>1-50</b>	<b>1-180</b>	<b>1-100</b>	<b>1-10</b>
Line width	<250mm	40-200um					
Line width	@1m	< 1.0mm					
Line angle		7°, 10°, 15°, 30°, 45°, 50°, 60°, 75°, 90°					
Working distance	mm	50-2000 (adjustable)					
Laser operation mode		CW					
Luminance uniformity		80%					
Straightness error		Less than 0.5%					
Temperature & power stability		Less than 0.5%					
Expected lifetime	hours	10,000					

**ELECTRICAL SPECIFICATIONS**

Model		MDL-SL	MDL-L
Operating voltage		DC 5-30V	DC 5V
Current (max)	mA	300	
Modulation		TTL modulation Analog input adjusting power	
Modulation frequency	kHz	TTL up to 10 Analog up to 10	
Connection		Cable with flying leads	

**ENVIRONMENTAL CONDITIONS**

Operating temperature	°C	-10°C to 45°C
Storage temperature	°C	-20 °C to +80 °C
Humidity	%	< 90 %, non-condensing
Dissipated heat	W	< 1 W

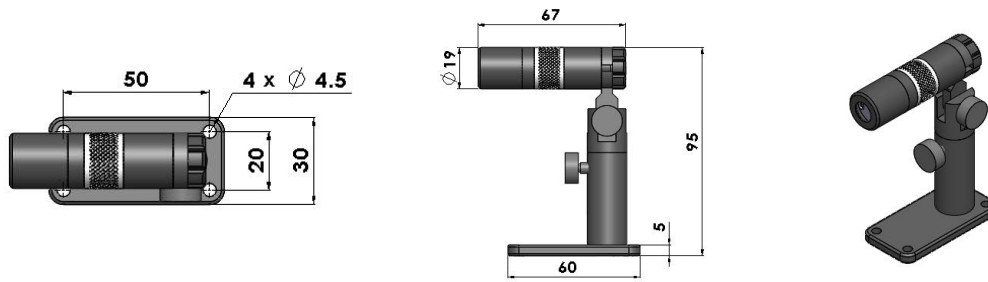
**MECHANICAL SPECIFICATIONS**

Model		MDL-SL	MDL-L
Length	mm	67 mm	109 mm
Diameter head Ø	mm	19 mm	19 mm
Dimensions of PCB	mm	46 x 12.5 mm (DC 5V) 30 x 20 mm (DC 5-30V)	
Material		Aluminum	

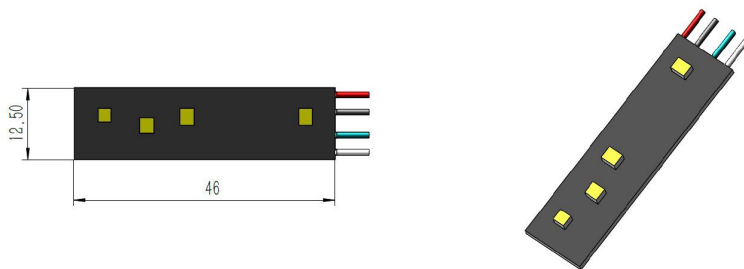
**KEYNOTES**

\*All testing data under the conditions of temperature 25°C.

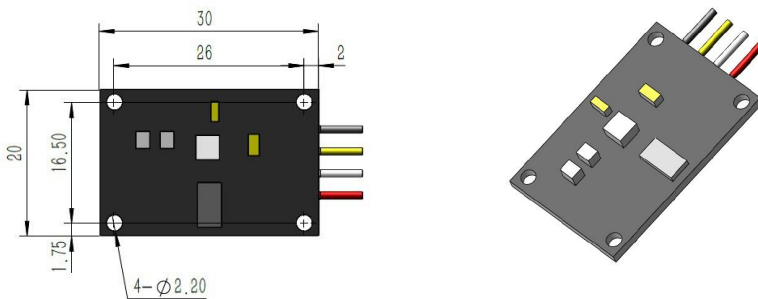
### DIMENSIONS OF MDL-SL SERIES LASER MODULE (mm):



### DIMENSIONS OF 5V PCB FOR MDL-SL SERIES LASER MODULE (mm):



### DIMENSIONS OF 5-30V PCB FOR MDL-SL SERIES LASER MODULE (mm):



### DIMENSIONS OF MDL-L SERIES LASER MODULE (mm):

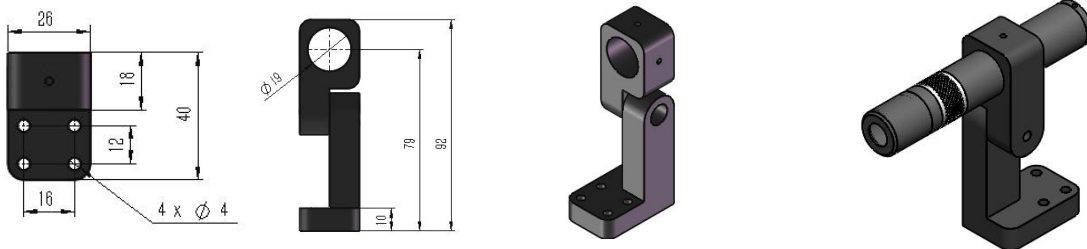


### Accessories

#### LASER MODULE MOUNT SPECIFICATIONS

Model	MDL-L	
Module mount size	mm	40 x 26 x 92mm
Applicable models size $\varnothing$	mm	19mm
Mounting hole $\varnothing$	mm	4mm
Mounting hole distance	mm	16 x 12mm

Dimensions of module mount for MDL-L (mm):



The module mount is used for 19mm diameter diode modules. Loosen the two small set screws on the top half of the module mount to put the laser in. The laser is held firmly by tighten the screws. The module mount base reserved the 4 holes for users to fix the laser on a flat and heat-dissipating surface. Moreover, the module mount can be tilted about 45°.

#### CONNECTOR

USB connector	Suit for access to computer control
Headset connector	Easy connect and disconnect

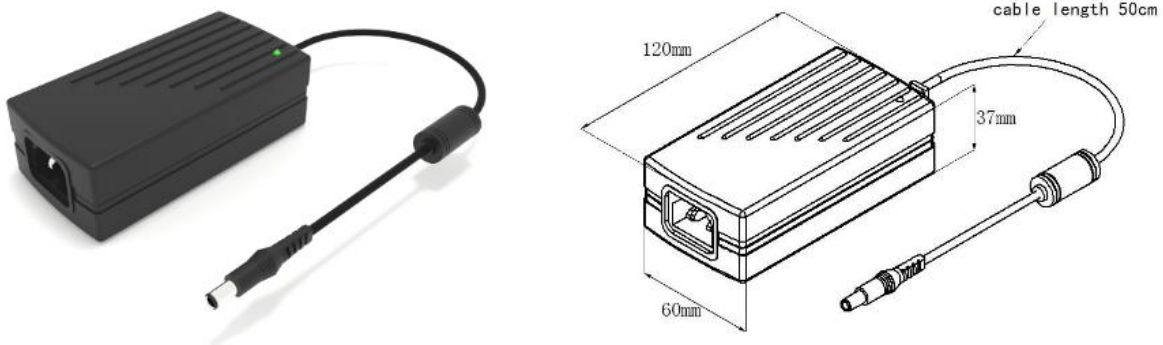


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## POWER ADAPTER

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

Dimensions of power adapter (mm):



The Universal Diode Laser Module Power Supply with CE-marked provide a well-regulated 5VDC. This autoranging 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 which could also be found in accessories is compatible with the power supply jack.