

MDL-SL/MDL-L Series Laser Module



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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 | 405 | 450 | 520 | 635-660 | 808 | 830-1550 |
| Wavelength tolerance | nm (typical) | ±5 | ±5 | ±5 | ±5 | ±10 | ±10 |
| Output power | mW | 1-180 | 1-80 | 1-50 | 1-180 | 1-100 | 1-10 |
| 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 |

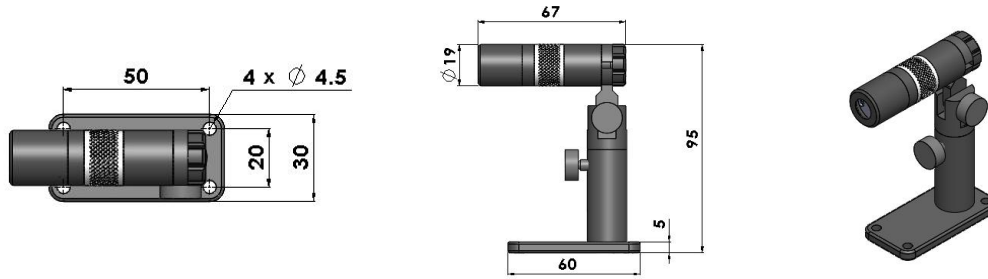
MECHANICAL SPECIFICATIONS

| | | | |
|-------------------|----|---|--------|
| 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 | |

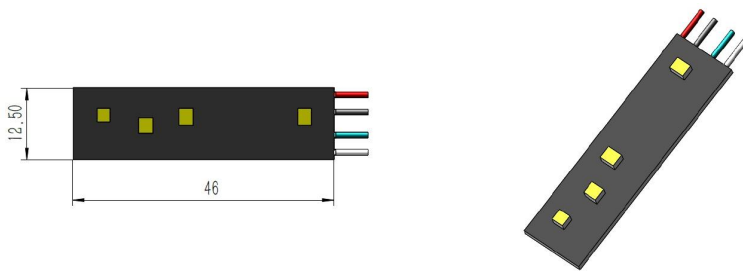
KEYNOTES

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

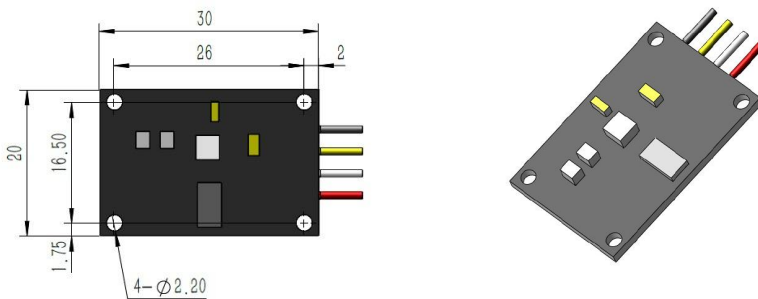
DIMENSIONS OF MDL-SL SERIES LASER MODULE (mm):



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

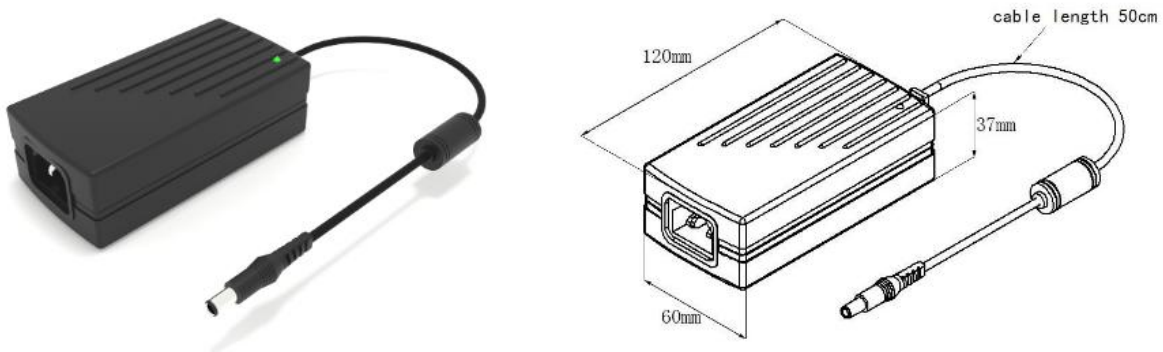
CONNECTOR

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

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 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 which could also be found in accessories is compatible with the power supply jack.