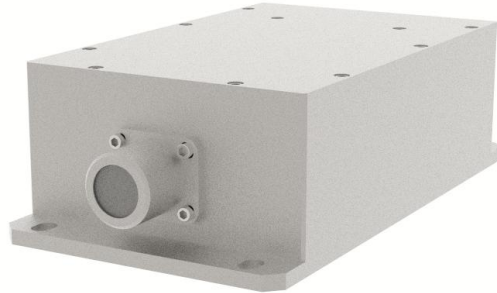


MDL-XR-LINE Series Laser



MDL-XR-LINE Series Laser

This series of structured laser is photoelectric integrated. They are integrated laser diode, temperature control and integrated circuit in one box. It is made features of high power, good line uniformity, high straightness and small volume. Its intelligent monitoring function enables it to maintain high performance stability in harsh environment. The integrated active cooling system keeps the laser diode at a constant temperature. It's the ideal solution for high power output and industrial design.

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

This Series Laser with its stable performance, high reliability works professionally in machine vision, road detection, railway detection, 3D measurement and analysis, etc.

FEATURES

- Output power up to 5W
- Wavelengths from 375 to 1550nm
- TTL/Analog modulation up to 30kHz
- RS232 function is optional

APPLICATIONS

- Machine vision
- Road detection
- Railway detection
- 3D measurement and analysis



SYSTEM SPECIFICATION*

Wavelength	nm	375	405	450	640	808	915	940	980	1470	1550
Wavelength tolerance	nm (typical)	±5	±5	±5	±5	±5	±5	±5	±10	±10	±20
Maximum output power	W	0.3	0.8	3.5	1	5	5	4.5	5	3.5	3.5
Power stability (rms, over 4hours)		<1%, <2%, <3%									
Line angle		5°, 7°, 10°, 15°, 30°, 45°, 50°, 60°, 75°, 90°, 100° (Other angles are available upon request)									
Laser operation mode		CW									
Luminance uniformity		80%									
Straightness error		Less than 0.5%									
85% peak power proportion in corss-section		95%									
Temperature & power stability		Less than 0.5%									
Expected lifetime	hours	10,000									

ELECTRICAL SPECIFICATIONS

Input voltage		DC 24V
Working current		<10A
Modulation		TTL modulation Analog modulation
Modulation frequency	kHz	TTL up to 30 Analog up to 30
Connection		SUB-D power cable

ENVIRONMENTAL CONDITIONS

Operating temperature	°C	10°C to 35°C
Storage temperature	°C	-20 °C to +80 °C
Humidity	%	< 90 %, non-condensing

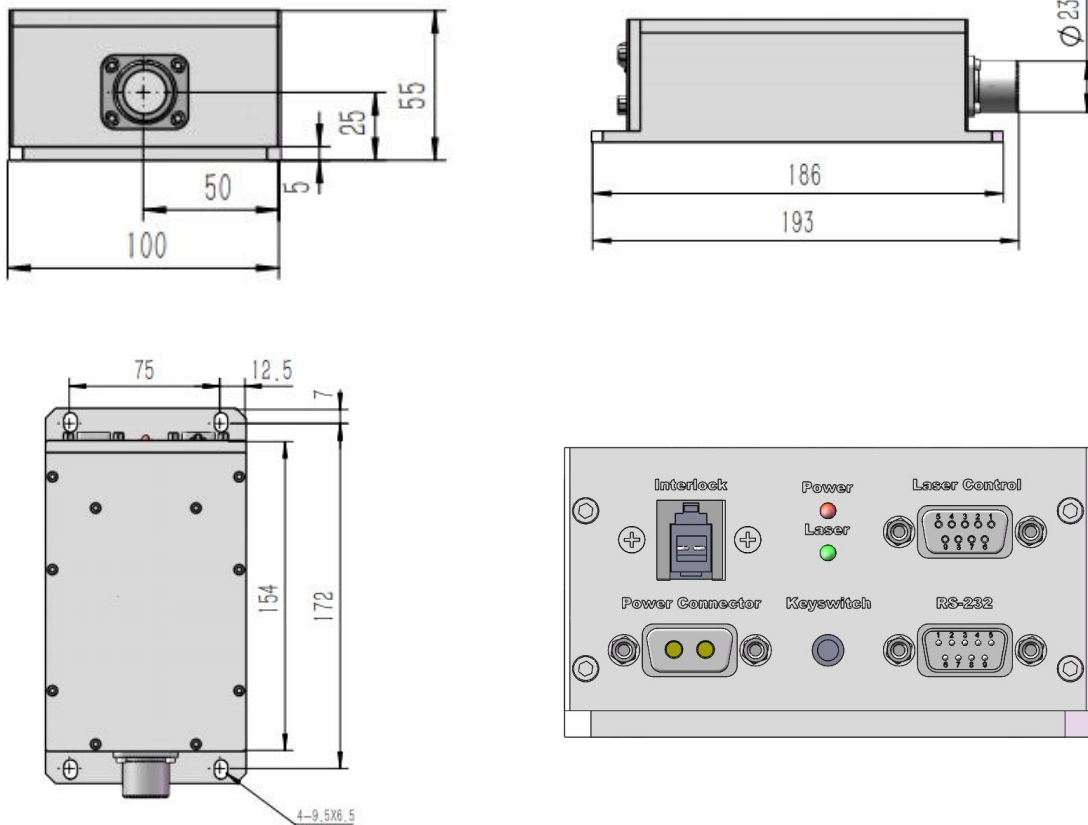
MECHANICAL SPECIFICATIONS

Dimensions of laser system	mm	193 x 100 x 55
Material		Aluminum

KEYNOTES

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

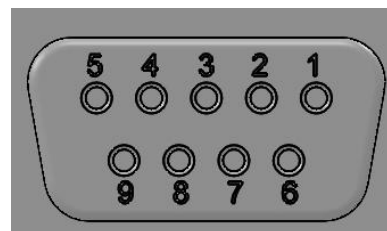
DIMENSIONS OF LASER HEAD WITH DRIVER 24VDC INTEGRATED (mm):



Laser Control Connector Specification:

The Laser Control 9-pin D-Sub connector is used for modulating the laser via a function generator.

- Pin 1: VCC I/O
- Pin 2: Modulation Signal Input
- Pin 3: NC
- Pin 4: System Enable Input
- Pin 5: NC
- Pin 6: Failure Output (Active Low)
- Pin 7: Laser On Input
- Pin 8: NC
- Pin 9: GND

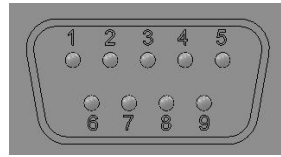


RS232 Connector Specification:

Pin 2: RXD

Pin 3: TXD

Pin 5: GND



SUB-D power cable

Each laser module is shipped with a SUB-D power cable. To operate the laser module connect it to a power supply unit capable of a +24V DC output voltage.

