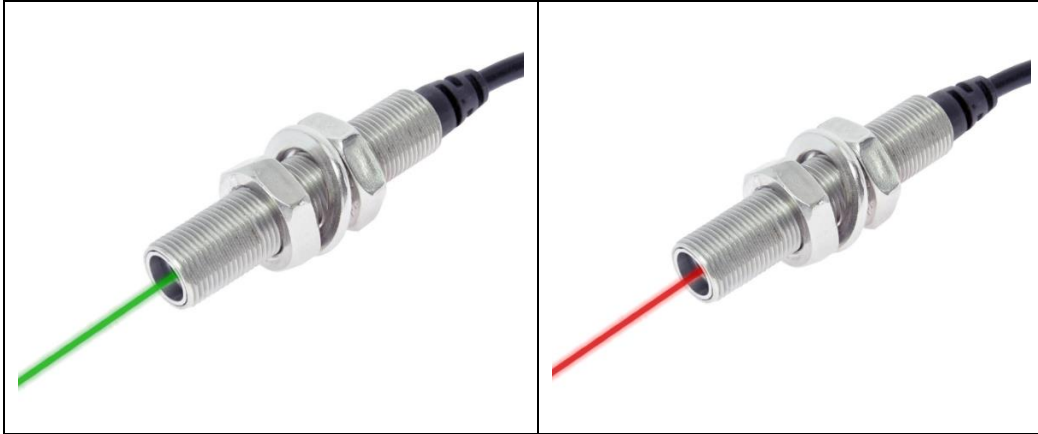


Green / Red Circular Dot Laser Module with TTL Function

VLM-520/650-72T Series



FEATURES:

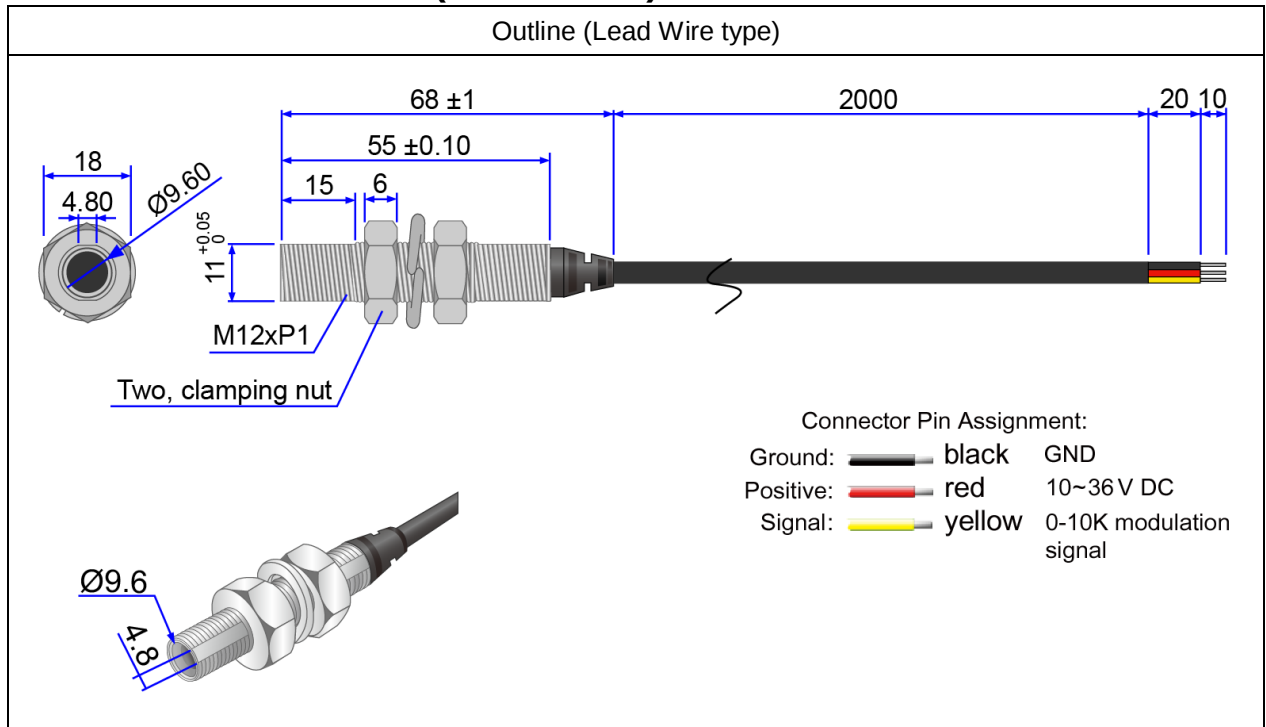
- Circular dot laser with a precision of less than 3 mm across a range of 0 to 5 meters.
- Robust stainless steel housing. High quality green / red laser spot, ideal for industrial application.
- Built with high precision glass lens.
- Industrial use laser modules have 10,000 hours working life.
- CW to 10K HZ stable power output for demanding power and speed are of important.
- Three laser power output level: LPO - Class 1 laser product
LPT - Class 2 laser product
LPA - Class 3R laser product
- Dimensions : M12 x 68 mm (M12 x 2.677")
- Wavelength : 520 series - 515~530 nm / 650 series - 645~665 nm
- 10~36 VDC operation.
- Connection type : Lead wire

APPLICATIONS: ideal for

- Industrial Green / Red Dot Laser Module - for positioning, measuring, pointing and laser sighting device.
- Wood processing.
- Metal processing.
- Stone processing.
- Textile industry.
- Food industry.
- Automotive industry.
- Medical science.

VLM-520/650-72T Series

OUTLINE DIMENSIONS (UNITS: mm)



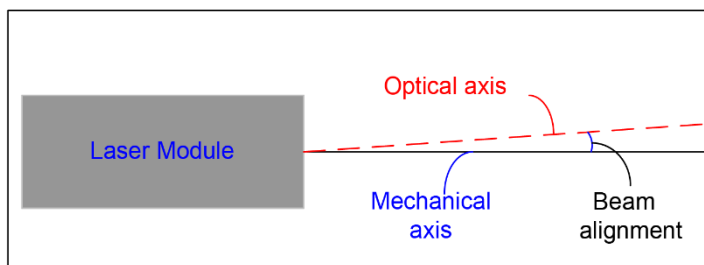
SPECIFICATIONS

Part Number		VLM-520-72T			VLM-650-72T		
		LPO	LPT	LPA	LPO	LPT	LPA
1	Spot Size	Less than Ø3mm @ 0~5M					
2	Dimensions	M12 x 68 mm (M12 x 2.677")					
3	Weight	100±1g					
4	Operating voltage (Vop)	10~36 VDC					
5	Operating current (Iop)	Less than 30mA					
6	Laser power output	0.2±0.1 mW	0.8±0.1 mW	3.5±0.5 mW	0.2±0.1 mW	0.8±0.1 mW	3.5±0.5 mW
7	Laser class	Class 1	Class 2	Class 3R	Class 1	Class 2	Class 3R
8	Wavelength (λp)	515~530 nm			645~665 nm		
9	Collimating lens	Aspherical glass lens					
10	Output aperture	2mm					
11	Beam shape	Circular					
12	Divergence (Half Angle)	Less than 0.4 mRad					
13	Beam alignment*	Less than 3°					
14	Operating temp. range**	-20°C ~+60°C					
15	Storage temp. range	-20°C ~+85°C					

VLM-520/650-72T Series

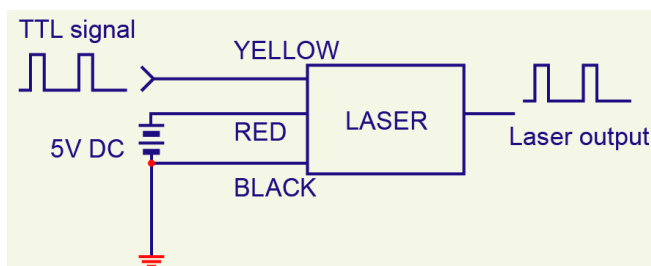
16	Housing material / Color	Stainless steel / Silver
17	Potential of housing	Insulated
18	Mod. Frequency range	0-10kHz
19	Operation mode***	TTL(High on)****
20	EN input current	1 to 20mA
21	Electrostatic discharge (ESD)	30KV / Arc protection
22	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.
23	Protection circuit	Reversed supply circuit protection, over-current protection, surge protection, Short circuit protection
24	Vibration resistance	10 to 55Hz,1.5mm amplitude for 2 hours each in X, Y and Z direction
25	Standard	IEC60825:2014
26	Wire type	UL-2464/22 AWG
27	Cable length	UL2464 D4.2,L=2000±30mm
28	Mount method	M12 screw
29	Mean time to failure (MTTF) 25°C	10000 hrs
30	International Protection Marking	IP65
31	Application	Industrial alignment with modulation function
32	Suggestion work distance	0~5 meters / 0~16 feet

* Beam alignment:



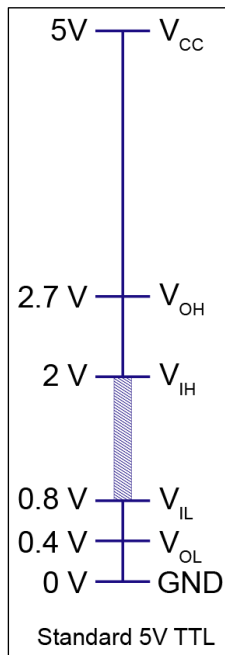
** Operation temperature means within this temperature range, the laser spot/line will not be affected to change the spot size/line width. It can still work over this range, but the laser spot size or laser line width will be larger.

*** TTL Operation Function Diagram



VLM-520/650-72T Series

**** TTL Level



ORDER CODE

Order Code	Wavelength	Laser Power Output	Laser Class	Connection Type
VLM-520-72T LPA	520 nm	3.5±0.5mW	Class 3R	Lead Wire
VLM-520-72T LPT	520 nm	0.8±0.1mW	Class 2	Lead Wire
VLM-520-72T LPO	520 nm	0.2±0.1mW	Class 1	Lead Wire
VLM-650-72T LPA	650 nm	3.5±0.5mW	Class 3R	Lead Wire
VLM-650-72T LPT	650 nm	0.8±0.1mW	Class 2	Lead Wire
VLM-650-72T LPO	650 nm	0.2±0.1mW	Class 1	Lead Wire

SAFETY LABEL

LPO:

CLASS I LASER PRODUCT

LPT:



LPA:

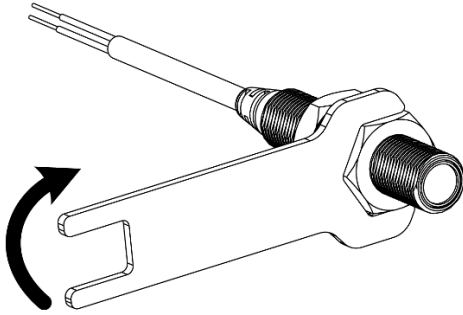


INSTALLATION

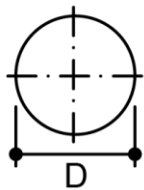
MOUNTING

The module must NOT be subjected to excessive shock with a hammer when it is installed, otherwise the module may be damaged or lose its water resistivity.

Do not tighten the nut with excessive force (Toque 30N.m). A washer must be used with the nut.

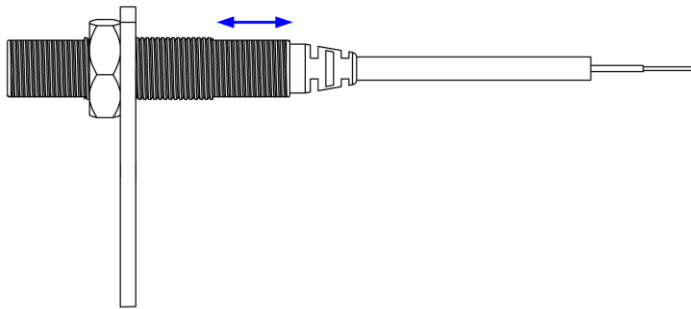


RECOMMENDED MOUNTING HOLE DIMENSIONS

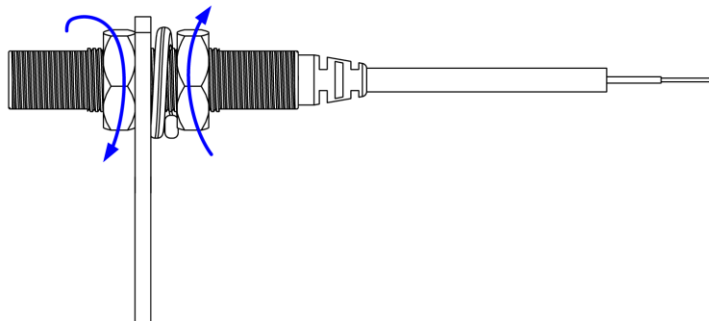


OUTER DIAMETER OF MODULE	M12
DIMENSION D	13 ^{+0.1} ₀ DIA.

1. First, move the laser module to your preferred position.

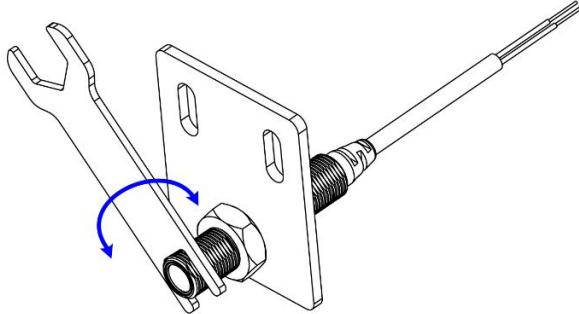


2. Next, tighten the nut with the washer on the plate.

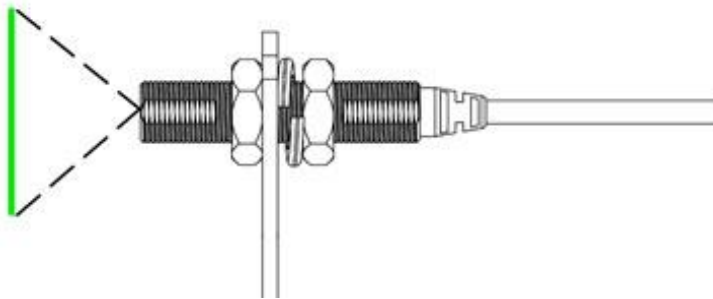


INSTALLATION

3. Then, use the wrench to rotate the laser module, align the datum to your preferred position.



4. Lastly, check if the projected laser line is at the right position to your need.
Rotate the laser module again if the laser line isn't aligned with your preferred position.



INSTALLATION

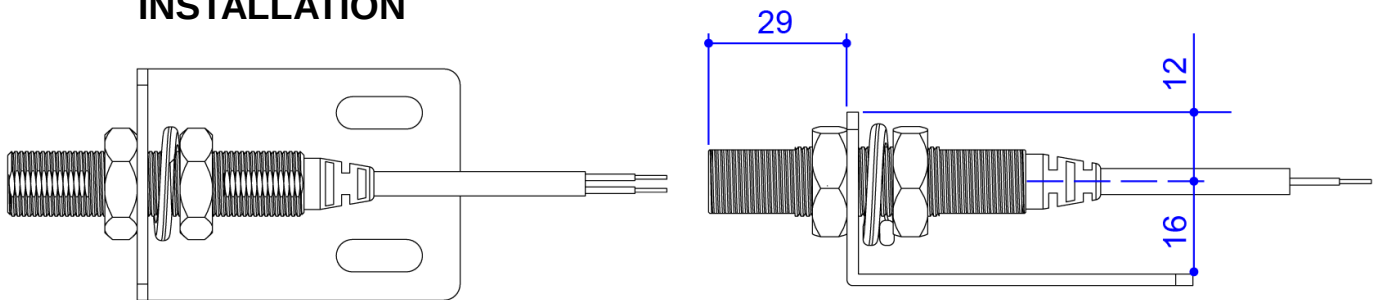


Fig.2 Demonstration with L shape plate (shape plate not included)

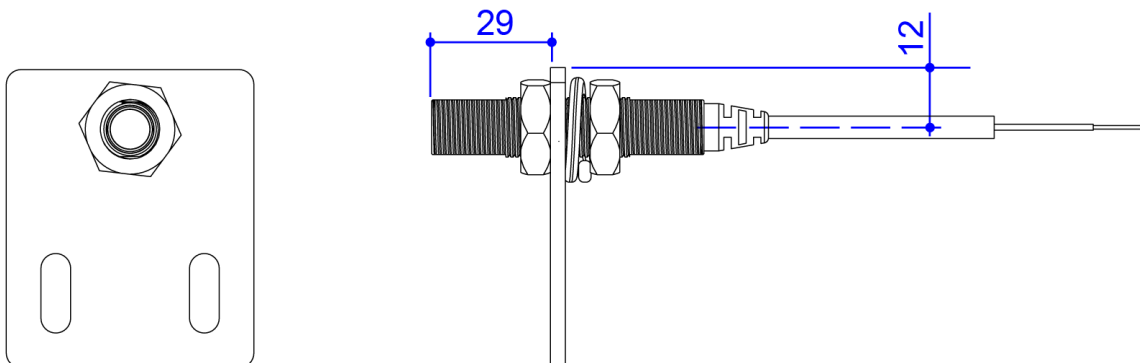


Fig.3 Demonstration with I shape plate (shape plate not included)