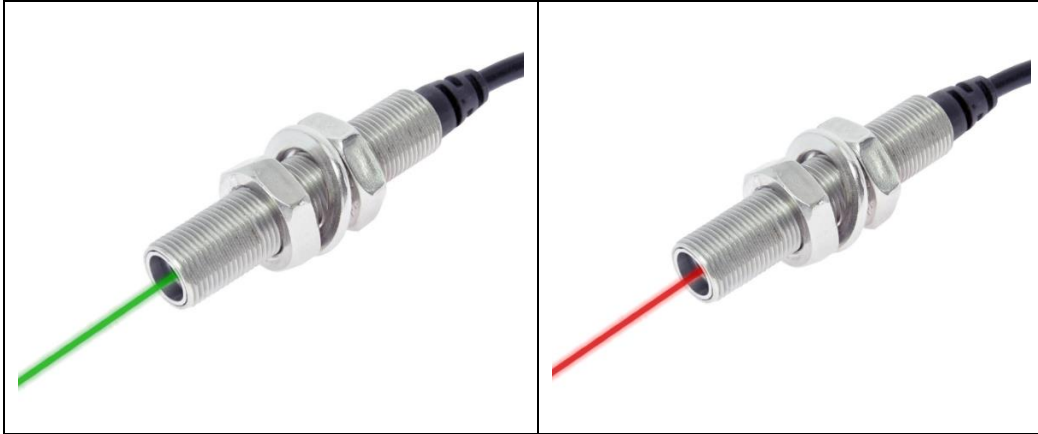


## Green / Red Dot Laser Module

### VLM-520/650-71 Series



#### FEATURES:

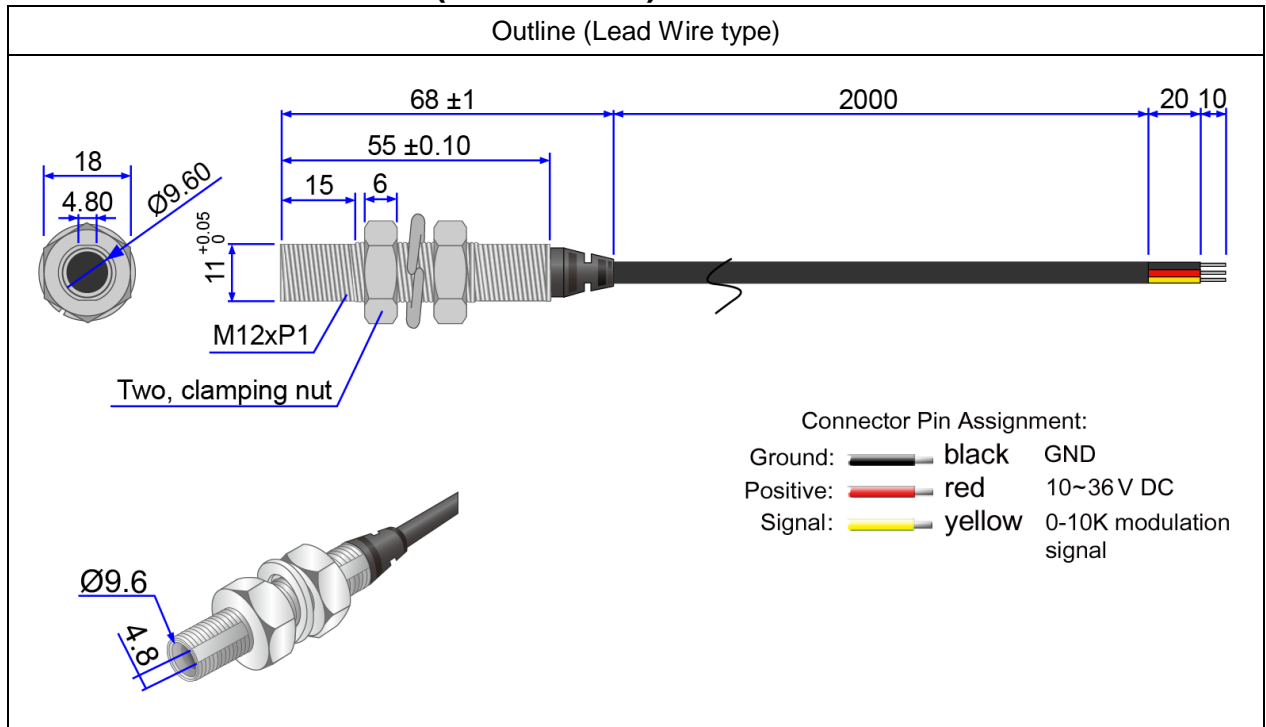
- Extremely small circular laser dot within 1 meter.
- Robust stainless steel housing.
- Built with high precision glass lens.
- CW to 10K HZ stable power output for demanding power and speed are of important.
- Customized focus within 1 meter available please direct contact us.
- Two laser power output level: LPO - Class 1 laser product  
LPT - Class 2 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-520/650-71 Series

### OUTLINE DIMENSIONS (UNITS: mm)



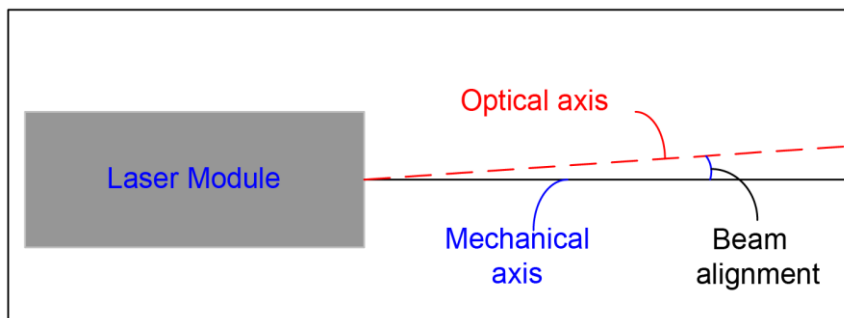
### SPECIFICATIONS

Part Number		VLM-520-71		VLM-650-71	
		LPO	LPT	LPO	LPT
1	Spot Size	< 1mm, From 0 to 50cm < 2mm, From 50cm to 90cm			
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 20mA at 24V			
6	Laser power output	Less than 0.39mW	Less than 1mW	Less than 0.39mW	Less than 1mW
7	Laser class	Class 1	Class 2	Class 1	Class 2
8	Wavelength (λp)	515~530 nm		645~665 nm	
9	Collimating lens	Aspherical glass lens			
10	Output aperture	0.6mm			
11	Beam shape	Circular			
12	Divergence (Half Angle)	Less than 0.4 mRad			
13	Beam alignment*	Less than 3°			

## VLM-520/650-71 Series

14	Operating temp. range**	-20°C ~+60°C
15	Storage temp. range	-20°C ~+85°C
16	Housing material	Stainless steel
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	IP68
31	Application	Industrial alignment with modulation function
32	Suggestion work distance	0~0.9 meters / 0~3 feet

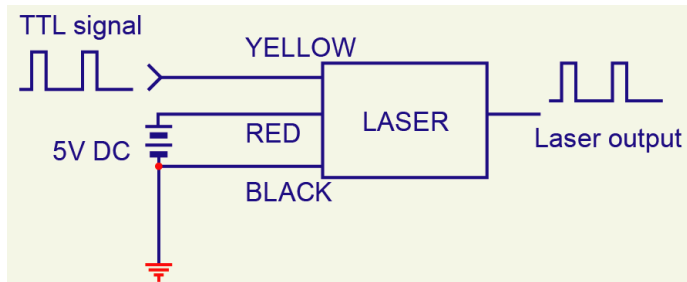
\* Beam alignment:



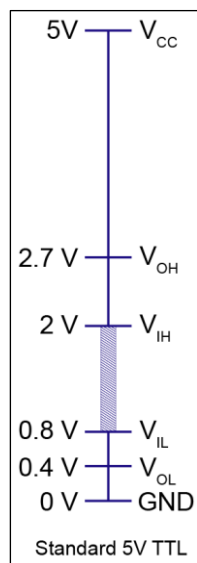
\*\* Operation temperature means within this temperature range, the laser spot/line will not be affected to change the spot size/line width. It can still work over this range, but the laser spot size or laser line width will be larger.

## VLM-520/650-71 Series

### \*\*\* TTL Operation Function Diagram



### \*\*\*\* TTL Level



## ORDER CODE

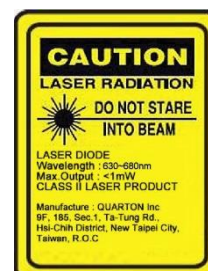
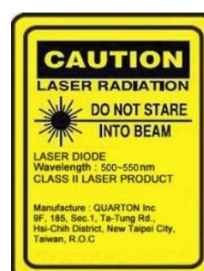
Order Code	Wavelength	Laser Power Output	Laser Class	Connection Type
VLM-520-71 LPT	520 nm	Less than 1mW	Class 2	Lead Wire
VLM-520-71 LPO	520 nm	Less than 0.39mW	Class 1	Lead Wire
VLM-650-71 LPT	650 nm	Less than 1mW	Class 2	Lead Wire
VLM-650-71 LPO	650 nm	Less than 0.39mW	Class 1	Lead Wire

## SAFETY LABEL

LPO:

**CLASS I LASER PRODUCT**

LPT:

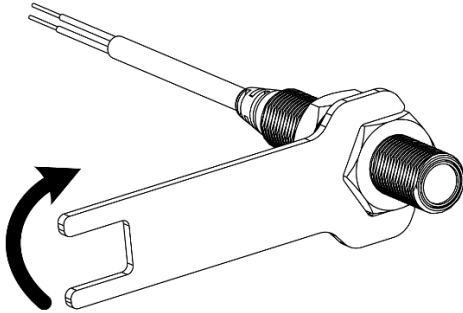


## INSTALLATION

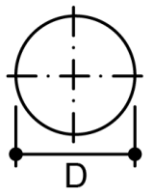
### MOUNTING

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.

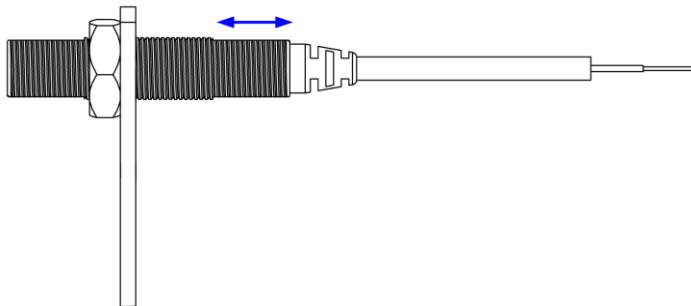


### RECOMMENDED MOUNTING HOLE DIMENSIONS

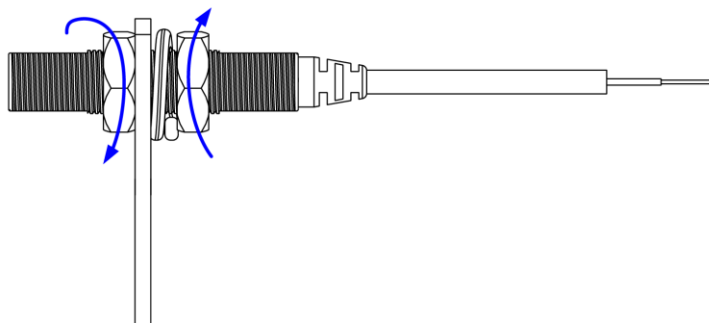


OUTER DIAMETER OF MODULE	M12
DIMENSION <b>D</b>	13 <sup>+0.1</sup> <sub>0</sub> DIA.

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

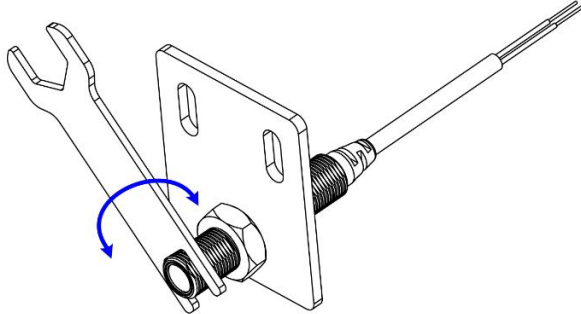


2. Next, tighten the nut with the washer on the plate.

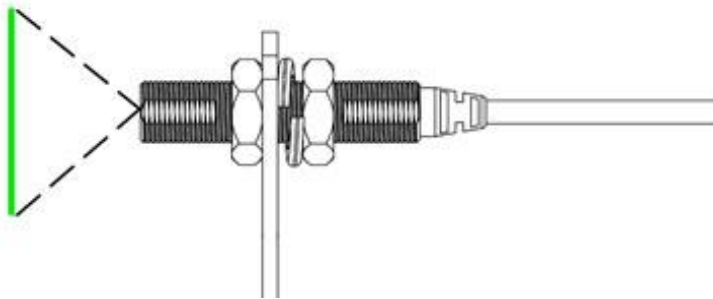


## INSTALLATION

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

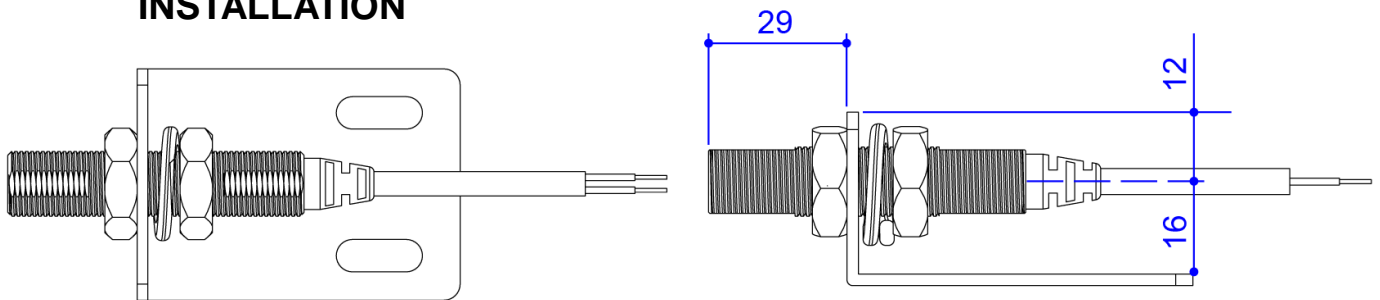


Fig.2 Demonstration with L shape plate (shape plate not included)

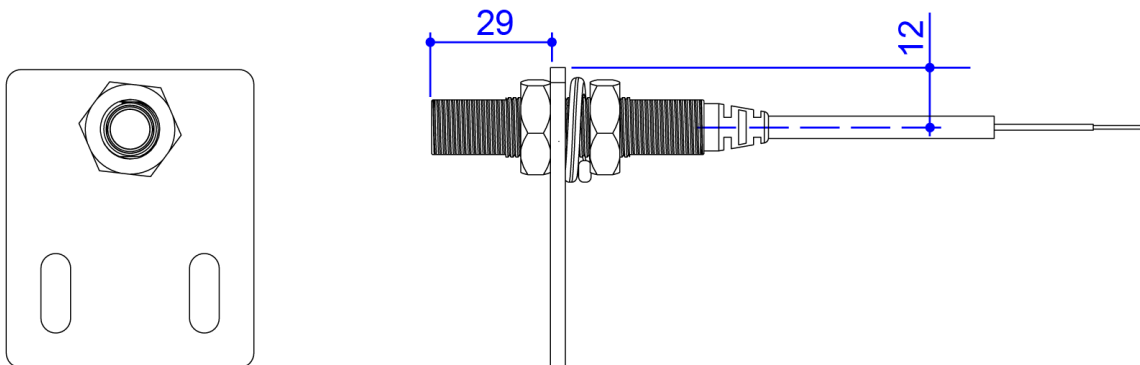


Fig.3 Demonstration with I shape plate (shape plate not included)