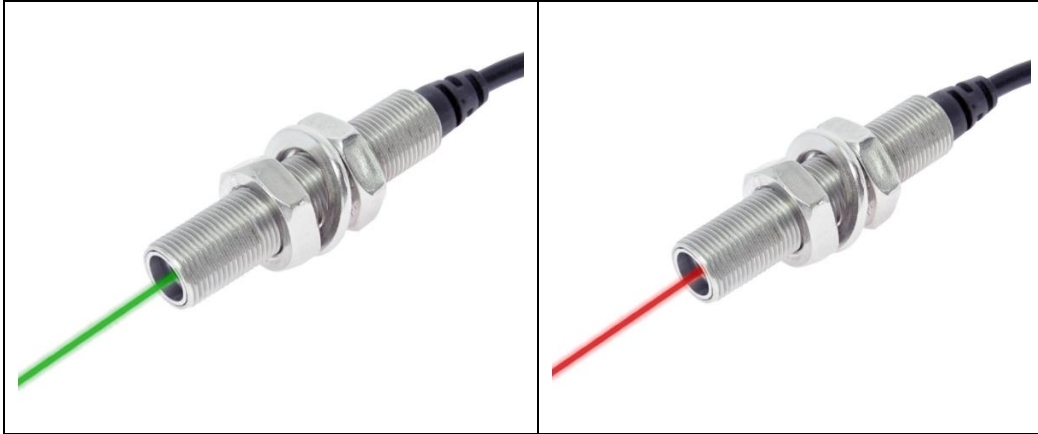


Green / Red Circular Dot Laser Module with TTL Function

VLM-520/650-72T Series



FEATURES:

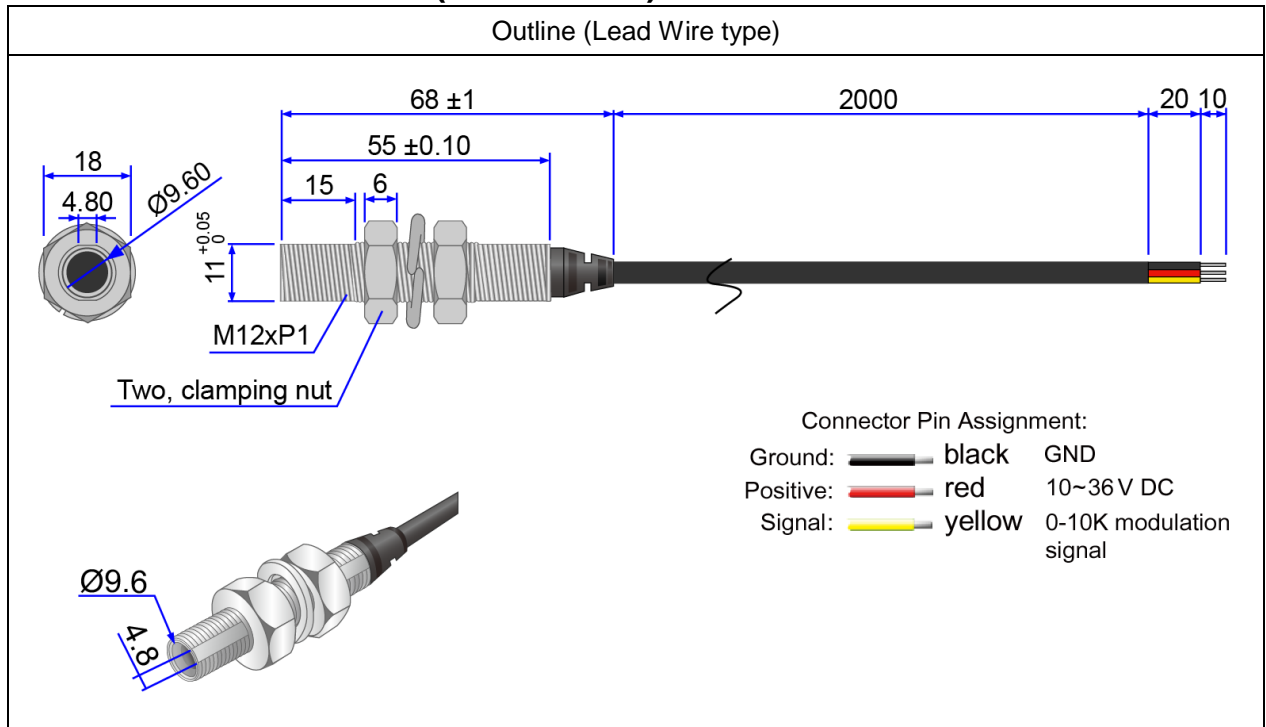
- Circular dot laser with a precision of less than 3 mm across a range of 0 to 5 meters.
- Robust stainless steel housing. High quality green / red laser spot, ideal for industrial application.
- Built with high precision glass lens.
- Industrial use laser modules have 10,000 hours working life.
- CW 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)



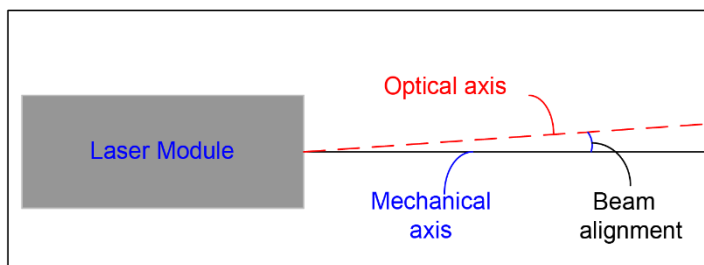
SPECIFICATIONS

| 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

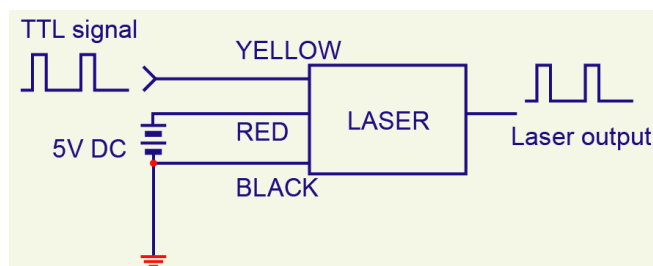
| | | |
|----|----------------------------------|---|
| 16 | Housing material / Color | Stainless steel / Silver |
| 17 | Potential of housing | Insulated |
| 18 | Mod. Frequency range | 0-10kHz |
| 19 | Operation mode*** | TTL(High on)**** |
| 20 | EN input current | 1 to 20mA |
| 21 | Electrostatic 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:



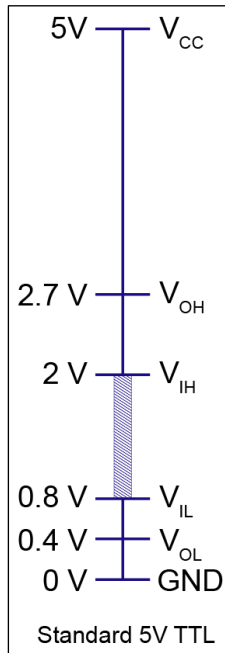
** Operation temperature means within this temperature range, the laser spot/line will not be affected to change the spot size/line width. It can still work over this range, but the laser spot size or laser line width will be larger.

*** 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:

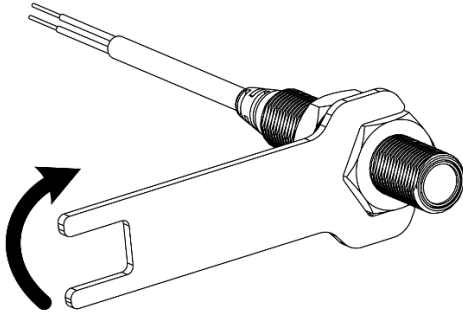


INSTALLATION

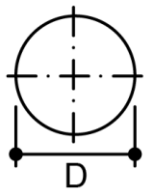
MOUNTING

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.

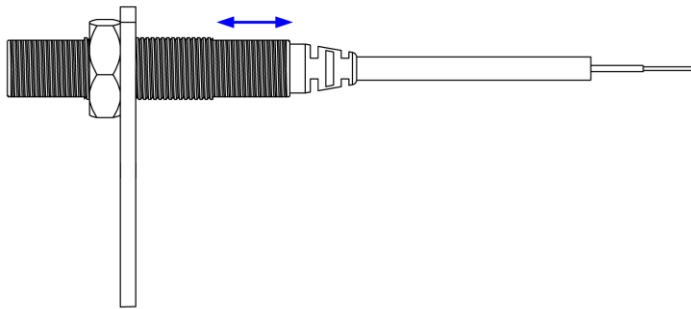


RECOMMENDED MOUNTING HOLE DIMENSIONS

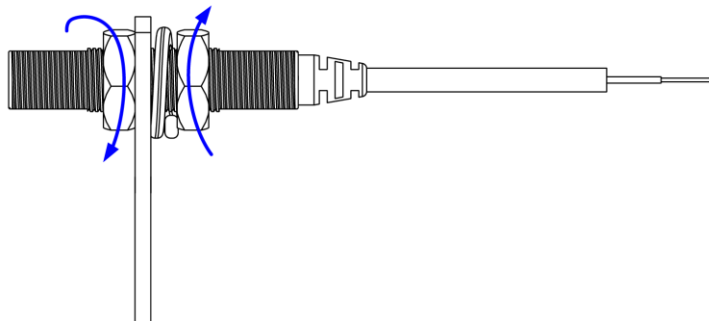


| | |
|--------------------------|--------------------------------------|
| OUTER DIAMETER OF MODULE | M12 |
| DIMENSION D | 13 ^{+0.1} ₀ DIA. |

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

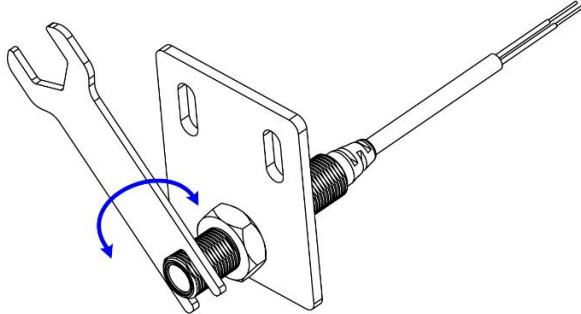


2. Next, tighten the nut with the washer on the plate.

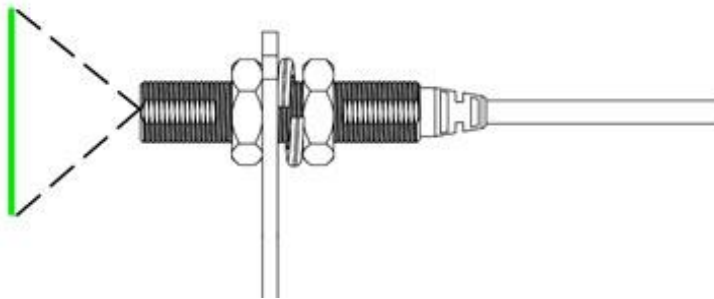


INSTALLATION

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

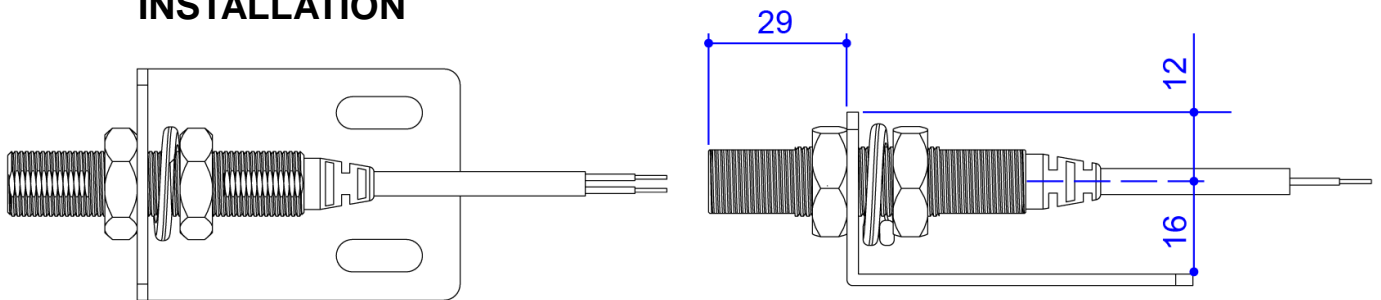


Fig.2 Demonstration with L shape plate (shape plate not included)

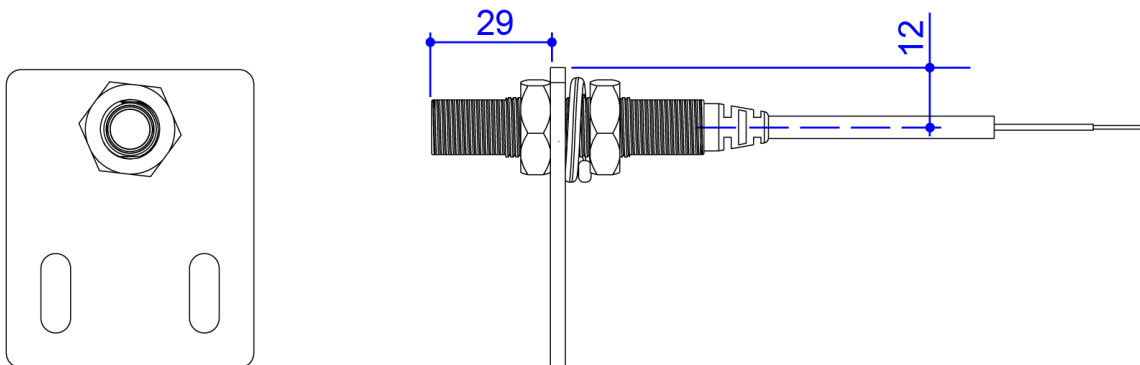


Fig.3 Demonstration with I shape plate (shape plate not included)