

## Red Circular Dot Laser Module

### VLM-650-62 Series



#### FEATURES:

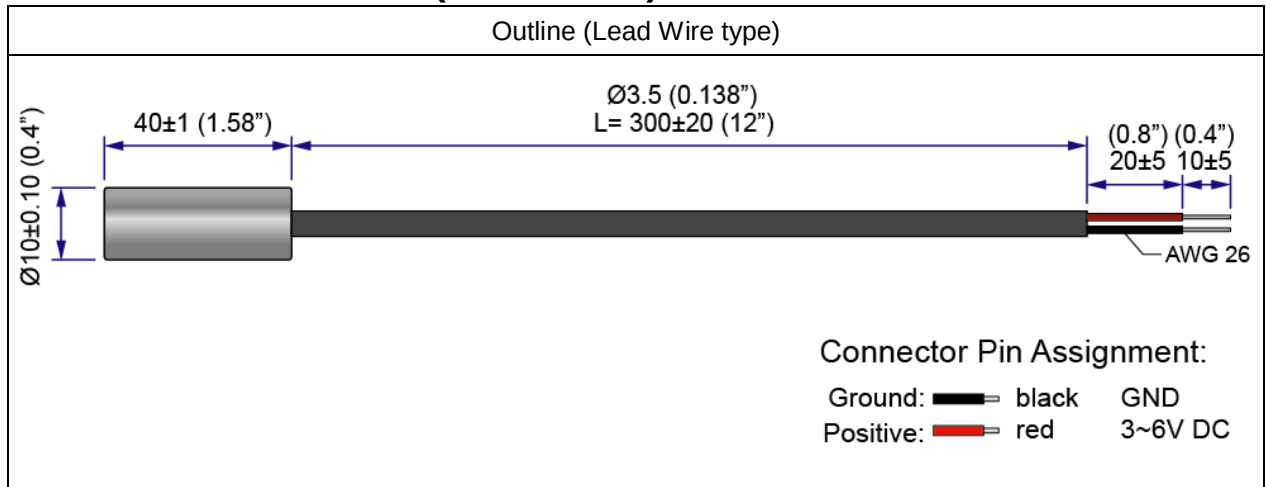
- Red circular dot laser with a precision of less than 3 mm across a range of 0 to 5 meters.
- Robust stainless steel housing. High quality red laser spot, ideal for industrial application that need precision circular dot.
- Built with high precision glass lens.
- Industrial use laser modules have 10,000 hours working life.
- Three laser power output level: LPO - Class 1 laser product  
LPT - Class 2 laser product  
LPA - Class 3R laser product
- Dimensions : Ø10 x 40 mm (Ø0.39" x 1.575")
- Wavelength : 645~665 nm
- 3~6 VDC operation.
- Connection type : Lead wire

#### APPLICATIONS: ideal for

- Industrial 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-650-62 Series

### OUTLINE DIMENSIONS (UNITS: mm)



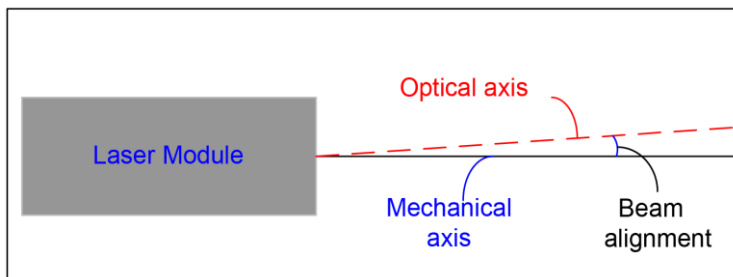
### SPECIFICATIONS

| Part Number |                                  | VLM-650-62                                                                                              |                 |                 |
|-------------|----------------------------------|---------------------------------------------------------------------------------------------------------|-----------------|-----------------|
|             |                                  | LPO                                                                                                     | LPT             | LPA             |
| 1           | Dimensions                       | $\varnothing 10 \times 40$ mm ( $\varnothing 0.39" \times 1.575"$ )                                     |                 |                 |
| 2           | Weight                           | 15±1g                                                                                                   |                 |                 |
| 3           | Operating voltage (Vop)          | 3~6 VDC                                                                                                 |                 |                 |
| 4           | Operating current (Iop)          | Less than 80mA                                                                                          | Less than 100mA | Less than 150mA |
| 5           | Laser power output               | 0.2±0.1mW                                                                                               | 0.8±0.1mW       | 3.5±0.5mW       |
| 6           | Laser class                      | Class 1                                                                                                 | Class 2         | Class 3R        |
| 7           | Wavelength (λp)                  | 645~665nm                                                                                               |                 |                 |
| 8           | Collimating lens                 | Aspherical glass lens                                                                                   |                 |                 |
| 9           | Output aperture                  | 2mm                                                                                                     |                 |                 |
| 10          | Beam shape                       | Circular                                                                                                |                 |                 |
| 11          | Spot size                        | Less than $\varnothing$ 3mm @ 0~5M                                                                      |                 |                 |
| 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                                                                                            |                 |                 |
| 16          | Housing material / Color         | Stainless steel / Silver                                                                                |                 |                 |
| 17          | Potential of housing             | Insulated                                                                                               |                 |                 |
| 18          | Electrostatic discharge (ESD)    | 30KV / Arc protection                                                                                   |                 |                 |
| 19          | Moisture sensitivity level (MSL) | Level 1 - acc to JEDEC J-STD-020E.                                                                      |                 |                 |
| 20          | Protection circuit               | Reversed supply circuit protection, over-current protection, surge protection, Short circuit protection |                 |                 |

## VLM-650-62 Series

|    |                                  |                                                                     |
|----|----------------------------------|---------------------------------------------------------------------|
| 21 | Vibration resistance             | 10 to 55Hz,1.5mm amplitude for 2 hours each in X, Y and Z direction |
| 22 | Standard                         | IEC60825:2014                                                       |
| 23 | Wire type                        | 2464 2-WIRE CABLE 26 AWG                                            |
| 24 | Cable length                     | 330±30mm                                                            |
| 25 | Mean time to failure (MTTF) 25°C | 10000 hrs.                                                          |
| 26 | International Protection Marking | IP65                                                                |
| 27 | Application                      | Industrial alignment                                                |
| 28 | 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.

## ORDER CODE

| Order Code     | Wavelength | Laser Power Output | Laser Class | Connection Type |
|----------------|------------|--------------------|-------------|-----------------|
| VLM-650-62 LPA | 650 nm     | 3.5±0.5mW          | Class 3R    | Lead Wire       |
| VLM-650-62 LPT | 650 nm     | 0.8±0.1mW          | Class 2     | Lead Wire       |
| VLM-650-62 LPO | 650 nm     | 0.2±0.1mW          | Class 1     | Lead Wire       |

## SAFETY LABEL

LPA:



LPT:



LPO:

CLASS I LASER PRODUCT

## Optional Accessories

**Quarton** offers mounts, power supply boards, battery pack and USB cable switch to help you running as quickly as possible. For more information, please visit [www.quarton.com](http://www.quarton.com), [www.quarton.com/contact](http://www.quarton.com/contact) or email [contact@quarton.com](mailto:contact@quarton.com).

**QLM-1125** - Laser Module Mount/Holder for diameter 6mm to 12.5mm, it's an ideal choose for mounted onto optical tables.

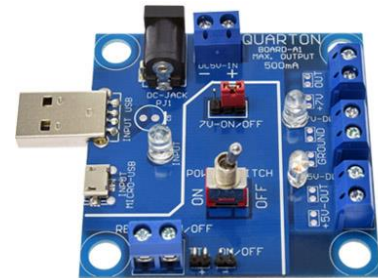
### Feature:

- 4 directions adjustable.
- Can be mounted onto the optical table with screws (Screws not included).
- Engraved scale for precision adjustable.



**LMPS-MP1** - Multi-function Laser Module Power Supply Board.

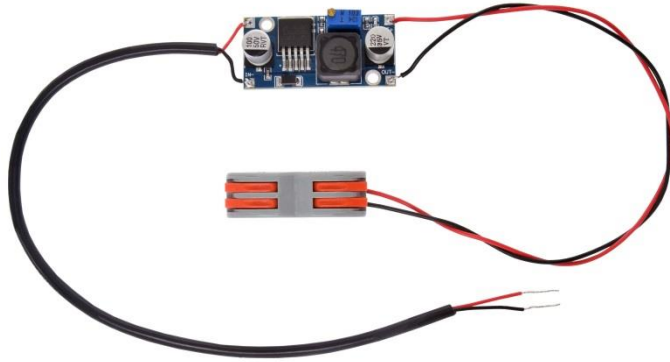
Four input : USB, micro USB, DC Power Jack(5.5 x 2.1), and terminal block. Two channel output : 7 VDC 500mA and 5 VDC 1A. Three switches-toggle switch, remote switch and TTL signal.



### Feature:

- Allow four kinds of power input: USB, micro USB, DC Power Jack(5.5x2.1) and terminal block.
- Two Channel output: 7 VDC 500mA and 5 VDC 1A.
- Built-in three switches: toggle switch, terminal block remote switch and TTL signal switch by on-board connect point.
- 7 VDC output work for all Quarton Laser Modules with 7-12 V operation Voltage (Vop).
- 5 VDC output work for all Quarton Laser Modules with 3-6 V operation Voltage (Vop).
- Three LED indicators: Input power indicator, 7V output indicator and 5V output indicator.

## Optional Accessories



**LMPS-MP2** - DC converter, In: 9-36V, Out: 5V 1A.



**LMPS-mUSB1** - Laser Module Power Supply Board, Input: micro USB, Output: 5 VDC 2A.

### Feature:

- Micro USB connector power input.
- Output 5 VDC 2A with alligator clips.
- For all Quarton Laser Modules that require 3-6V operation Voltage.



**LMPS-DC1** - Laser Module Power Supply Board, Input: DC Power Jack(5.5 x 2.1), Output: 5 VDC 2A.

### Feature:

- DC Power Jack(5.5 x 2.1) power input.
- Output 5 VDC 2A with alligator clips.
- For all Quarton Laser Modules that require 3-6V operation voltage.

## Optional Accessories



### **CLM-BP4N3** - Battery pack (4\* AA batteries)

\*\*\* AA Batteries are **NOT** included in package.

#### **Feature:**

- USB Output Voltage: 5 VDC.
- Color: Black.



### **CLM-UM3M** - USB to micro USB Cable.

#### **Feature:**

- Length: 3 meters.
- Color: Black.