

Red Circular Dot Laser Module

VLM-650-62 Series



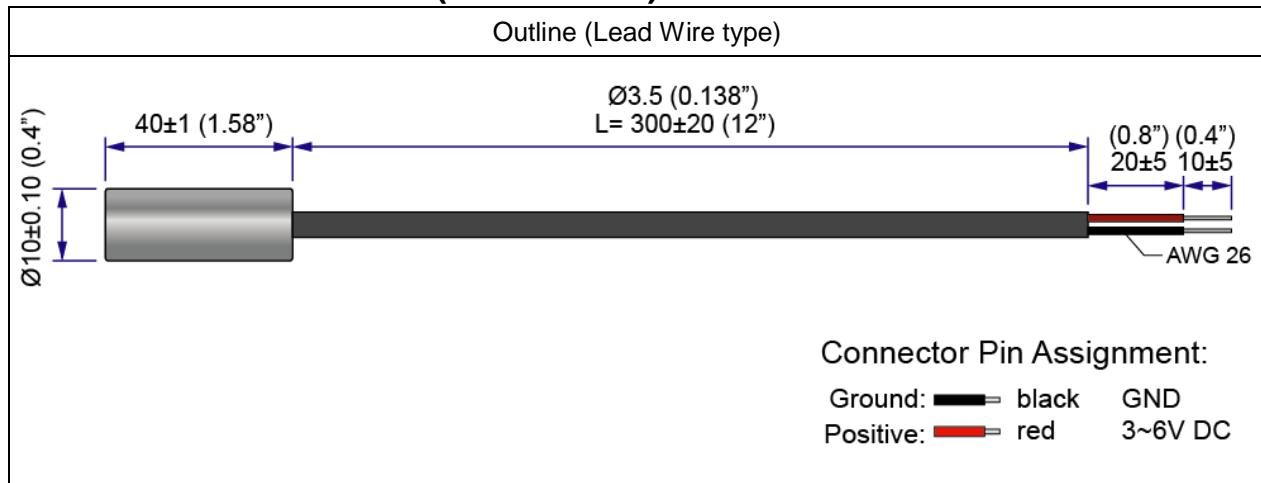
FEATURES:

- High-Precision Red Dot - Produces a circular dot with less than 3 mm deviation over 0~5 meters.
- Durable Industrial Design - Stainless-steel housing and glass optics ensure long life (10,000 hours) and stable output in harsh environments.
- Integrated Optics & Electronics - Compact module combines precision glass lens, red laser diode, and APC driver for reliable performance.
- Easy System Integration - with lead-wire connection; compact, robust form fits OEM and retrofit systems.
- 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
- Wide Application Range - Ideal for industrial alignment and positioning, machine vision, measurement tools, medical/lab aiming, automation, and educational or research equipment.

650 nm Laser (Deep Red): A widely available and cost-effective red wavelength. Slightly less visible than 635 nm but popular due to diode affordability and durability.

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OUTLINE DIMENSIONS (UNITS: mm)



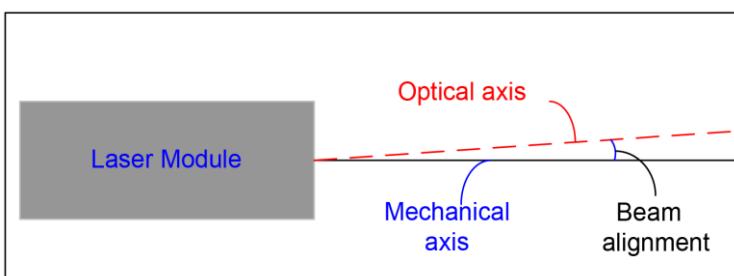
SPECIFICATIONS

Part Number	VLM-650-62		
	LPO	LPT	LPA
1 Dimensions	Ø10 x 40 mm (Ø0.39" x 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 Ø 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		

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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, www.quarton.com/contact or email 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.

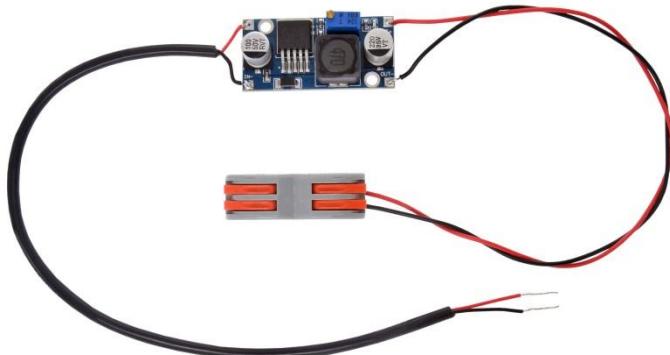
Four input : USB, micro USB, DC Power Jack(5.5 x 2.1), and terminal block. Two channel output : 7 VDC 500mA and 5 VDC 1A. Three switches-toggle switch, remote switch and TTL signal.



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.