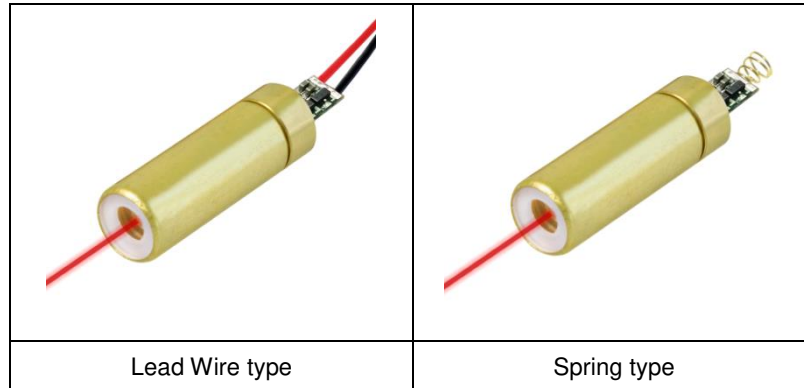


## Small Spot Laser

### VLM-650-12 Series



#### FEATURES:

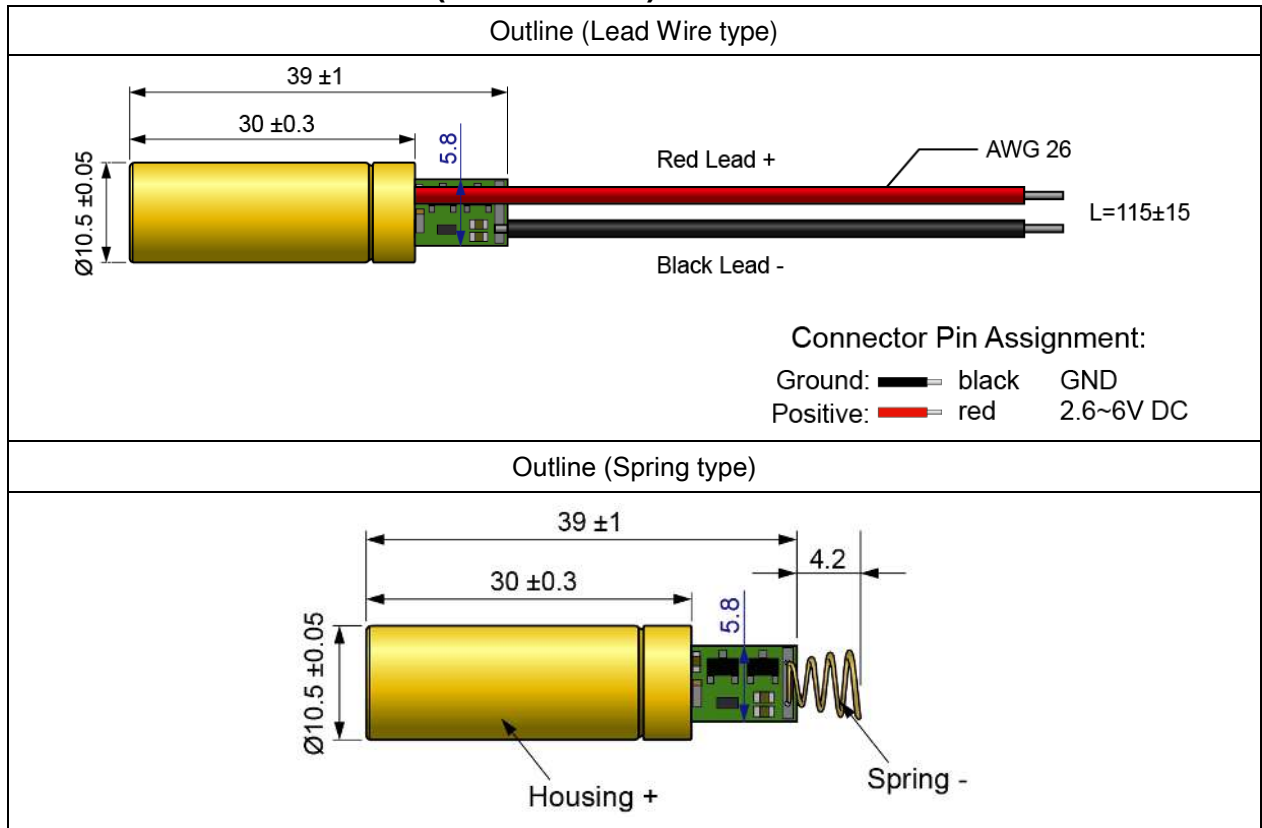
- Red Small-Spot Dot Laser.
- Small-Spot Laser module for use with high-precision devices.
- This module has integrated optic, laser diode, and APC driver circuit.
- APC Driver Circuit enables the Laser output power safe and constant.
- Includes patented solid brass structure for the best shock resistance and better heat transfer consideration.
- High-Accuracy Aspherical Plastic Lens provides Small-Spot Dot Laser.
- Dimensions :  $\varnothing$  10.5 x 39 mm ( $\varnothing$  0.413" x 1.535").
- Wavelength : 650 nm
- Output power : Class II – less than 1mW  
Class IIIa – less than 2.5mW.
- Beam Divergence: 0.25 mRad.
- 2.6~6 VDC operation.
- Connection type: Lead wire / Spring.

#### APPLICATIONS:

- Red Small Spot Dot Laser, smaller laser spot for Industrial high-precision positioning, measuring, alignment, leveling, adjusting, targeting and laser sighting device.
- Wood processing.
- Metal processing.
- Stone processing.
- Textile industry.
- Food industry.
- Automotive industry.
- Medical science.

## VLM-650-12 Series

### OUTLINE DIMENSIONS (UNITS: mm)



### SPECIFICATIONS

SPECIFICATIONS		VLM-650-12			
		LPT	LPA	SPT	SPA
1	Dimensions	Ø10.5 x 39 mm (Ø0.413" x 1.535")			
2	Operating voltage (Vop)	2.6~6 VDC			
3	Operating current (Iop)	Less than 35mA	Less than 50mA	Less than 35mA	Less than 50mA
4	Laser power output	Less than 1mW	Less than 2.5mW	Less than 1mW	Less than 2.5mW
5	Laser class	Class II	Class IIIa	Class II	Class IIIa
6	Wavelength at peak emission (λp)	645~665nm			
7	Collimating lens	Aspherical plastic lens			
8	Output aperture	5mm			
9	Beam shape	Circular			
10	Spot size at 5M / 20M	2.5±0.5 mm / 10±1 mm			
11	Divergence (Half Angle)	0.25 mRad			
12	Beam alignment	Less than 3°			
13	Operating temp. range*	+10°C ~+40°C			

## VLM-650-12 Series

14	Storage temp. range	-20°C ~+65°C	
15	Housing material	Bronze	
16	Potential of Housing**	VDD(+)	
17	Electrostatic discharge (ESD)	30KV	
18	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.	
19	Connection type	1007-26 AWG	Spring
20	Cable length	115±15mm	4.2±1mm
21	Mean time to failure (MTTF) 25°C	10000hrs	
22	Application	Long range application	
23	Suggestion work distance	10~100 meters / 30~300 feet	

\* Operation temperature: it 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.

\*\* Laser module housing is an electrical positive surface, it is imperative that contact between the laser module and the machine be avoided. This is to prevent damage from the machine electrical leakage. Surge protected power supply to the laser module is strongly recommended.

### ORDER CODE

Order Code	Wavelength	Laser Power Output	Laser Class	Connection Type
VLM-650-12 LPA	650 nm	Less than 2.5mW	Class IIIa	Lead Wire
VLM-650-12 LPT	650 nm	Less than 1mW	Class II	Lead Wire
VLM-650-12 SPA	650 nm	Less than 2.5mW	Class IIIa	Spring
VLM-650-12 SPT	650 nm	Less than 1mW	Class II	Spring

### SAFETY LABEL

