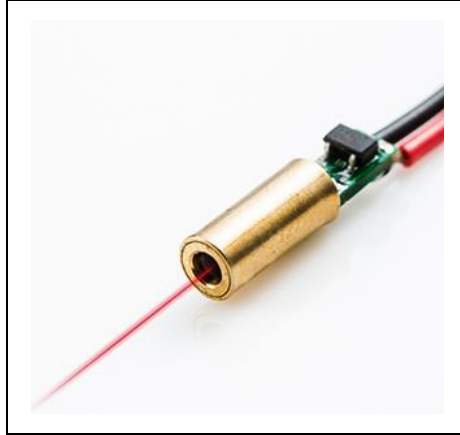


Mini-Size Red Dot Laser

VLM-650-21 Series (Plastic Lens)



FEATURES:

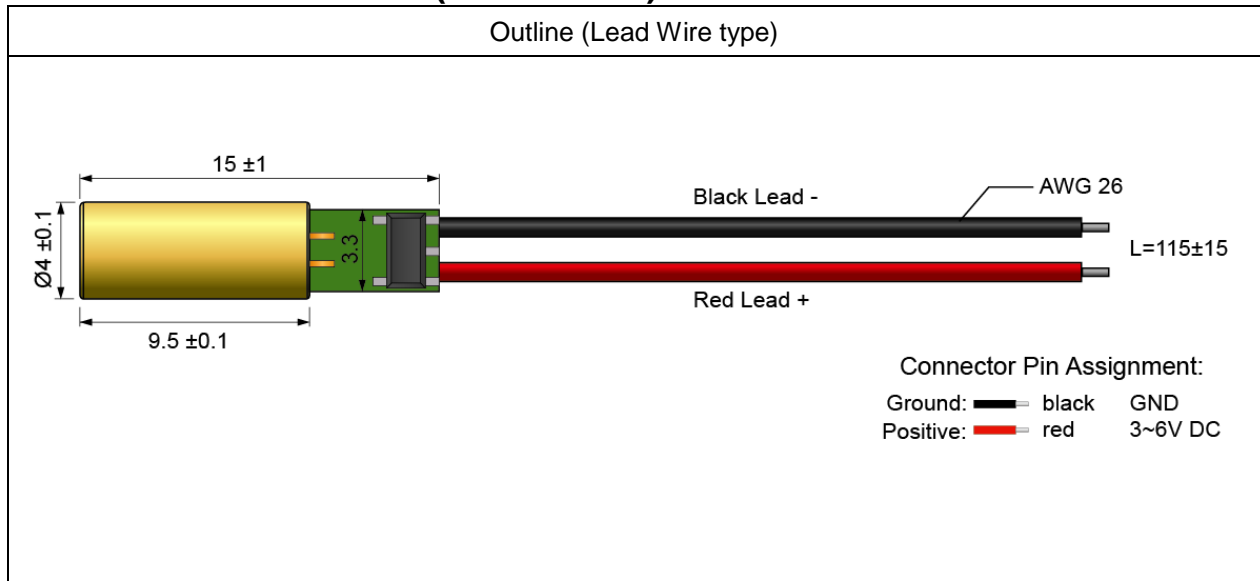
- This module has integrated optic, laser diode, and APC driver circuit.
- APC Driver Circuit enables the Laser output power safe and constant.
- Aspherical plastic lens provides Dot Laser.
P.S. : This module works between -10°C and +50°C either, but the laser spot size might be larger when it does not works between +15°C ~ +30°C.
- Dimensions : Ø4 x 15 mm (Ø0.157" x 0.59")
- Wavelength : 645~660nm
- Laser power output : LPA - Class IIIa – less than 2.5mW.
LPT - Class II – less than 1mW.
- Beam Divergence (Half Angle) : 2.5 mRad
- 3~6 VDC operation.
- Connection type : Lead wire

APPLICATIONS:

- Mini-Size 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-650-21 Series

OUTLINE DIMENSIONS (UNITS: mm)



SPECIFICATIONS

SPECIFICATIONS		VLM-650-21-	
		LPT	LPA
1	Dimensions	$\varnothing 4 \times 15$ mm ($\varnothing 0.157" \times 0.59"$)	
2	Operating voltage (Vop)	3~6 VDC	
3	Operating current (Iop)	Less than 25mA	Less than 30mA
4	Laser power output	0.7 ± 0.2 mW	2 ± 0.5 mW
5	Laser class	Class II	Class IIIa
6	Wavelength at peak emission (λ_p)	645~660nm	
7	Output aperture	2.1mm	
8	Collimating lens	Aspherical plastic lens	
9	Beam shape	Ellipse	
10	Spot size at 5M	7 ± 1 mm	
11	Divergence (Half Angle)	2.5 mRad	
12	Beam alignment	Less than 3°	
13	Operating temp. range*	$+15^\circ\text{C} \sim +30^\circ\text{C}$	
14	Storage temp. range	$-20^\circ\text{C} \sim +65^\circ\text{C}$	
15	Housing	Brass	
16	Potential of housing**	VDD(+)	
17	Electrostatic discharge (ESD)	20KV	
18	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.	

VLM-650-21 Series

19	Connection type	1007-26 AWG
20	Cable length	115±15mm
21	Mean time to failure (MTTF) 25°C	5000hrs
22	Application	Small size
23	Suggestion work distance	1~10 meters / 3~40 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.

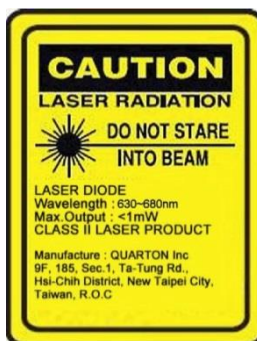
** Laser module housing is an electrical positive surface, it is imperative that contact between the laser module and the machine be avoided. This is to prevent damage from the machine electrical leakage. Surge protected power supply to the laser module is strongly recommended.

ORDER CODE

Order Code	Wavelength	Laser Power Output	Laser Class	Connection Type
VLM-650-21 LPA	650 nm	Less than 2.5mW	Class IIIa	Lead Wire
VLM-650-21 LPT	650 nm	Less than 1mW	Class II	Lead Wire

SAFETY LABEL

LPT:



LPA:

