

Industrial Use Line Laser

VLM-635/650-27 Series



FEATURES:

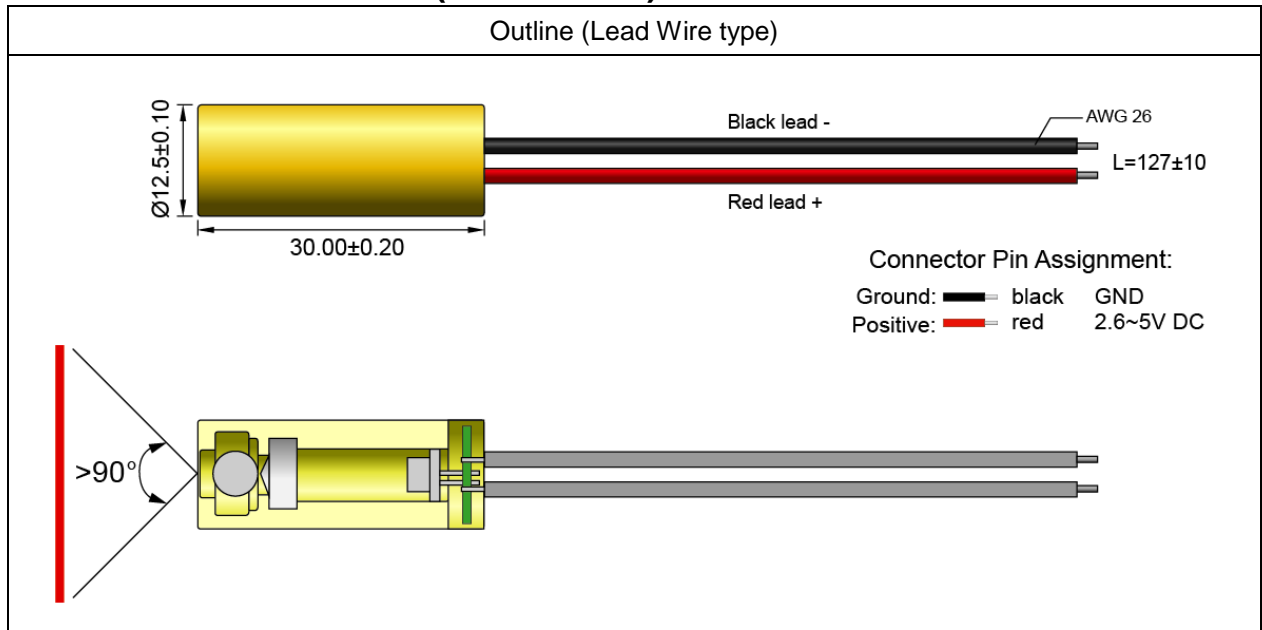
- Industrial Red Line Laser.
- The best line-accuracy and the widest emitting angle line Laser module for use with high-precision devices.
- This module has integrated quartz cylindrical lens, collimating lens, laser diode, and APC driver circuit.
- APC driver circuit enables the Laser output power safe and constant.
- Includes patented solid brass structure for the best shock resistance and better heat transfer consideration.
- Aspherical Plastic Lens and Quartz Cylindrical Lens provides Line Laser.
- Dimensions : Ø12.5 x 30 mm (Ø0.492" x 1.181")
- Wavelength : 630 / 650 nm
- Two laser power output : Class 1M / Class 2M
- Laser line accuracy: 40" (+/- 1mm @5m).
- Emitting Angle : >90°
- 2.6~5 VDC operation.
- Connection type : Lead wire

APPLICATIONS:

- High accuracy Red Straight Line Laser, for Industrial high-precision leveling, alignment, adjusting, positioning, measuring and targeting device.
- Wood processing.
- Metal processing.
- Stone processing.
- Textile industry.
- Food industry.
- Automotive industry.
- Medical science.

VLM-635-27 Series

OUTLINE DIMENSIONS (UNITS: mm)



SPECIFICATIONS

SPECIFICATIONS		VLM-635-27	
		LPT	LPT-10
1	Dimensions	Ø12.5 x 30 mm (Ø0.492" x 1.181")	
2	Operating voltage (Vop)	2.6~5 VDC	
3	Operating current (Iop)	Less than 50mA	Less than 55mA
4	Optical power*	Less than 2mW	4~5mW
5	Laser power output**	Less than 0.39mW	
6	Laser class	Class 1M	
7	Wavelength at peak emission (λp)	630~645nm	
8	Cylindrical lens	Quartz cylindrical lens	
9	Collimating lens	Aspherical plastic lens	
10	Beam shape	Line	
11	Laser Line width	3 ±0.5mm @5m, 6 ±0.5mm @10m	
12	Laser line accuracy	40" (± 1mm @5M)	
13	Emitting angle	More than 90°	
14	Operating temp. range***	+10°C ~+40°C	
15	Storage temp. range	-20°C ~+65°C	
16	Housing material	Brass	
17	Potential housing****	VDD(+)	

VLM-635-27 Series

18	Electrostatic discharge (ESD)	30KV
19	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.
20	Wire type	1007-26 AWG
21	Cable length	127±10mm
22	Mean time to failure (MTTF) 25°C	5000hrs

* Optical power is total power output measured at the aperture of the laser.

** According to FDA 1040.10 & IEC 60825-1 regulations, laser power output is measured by 7mm aperture stop from a 10 cm distance of the laser.

*** 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.

**** 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	Optical power*	Laser power output**	Laser Class	Connection Type
VLM-635-27 LPT	635 nm	Less than 2mW	Less than 0.39mW	Class 1M	Lead Wire
VLM-635-27 LPT-10	635 nm	4~5mW	Less than 0.39mW	Class 1M	Lead Wire

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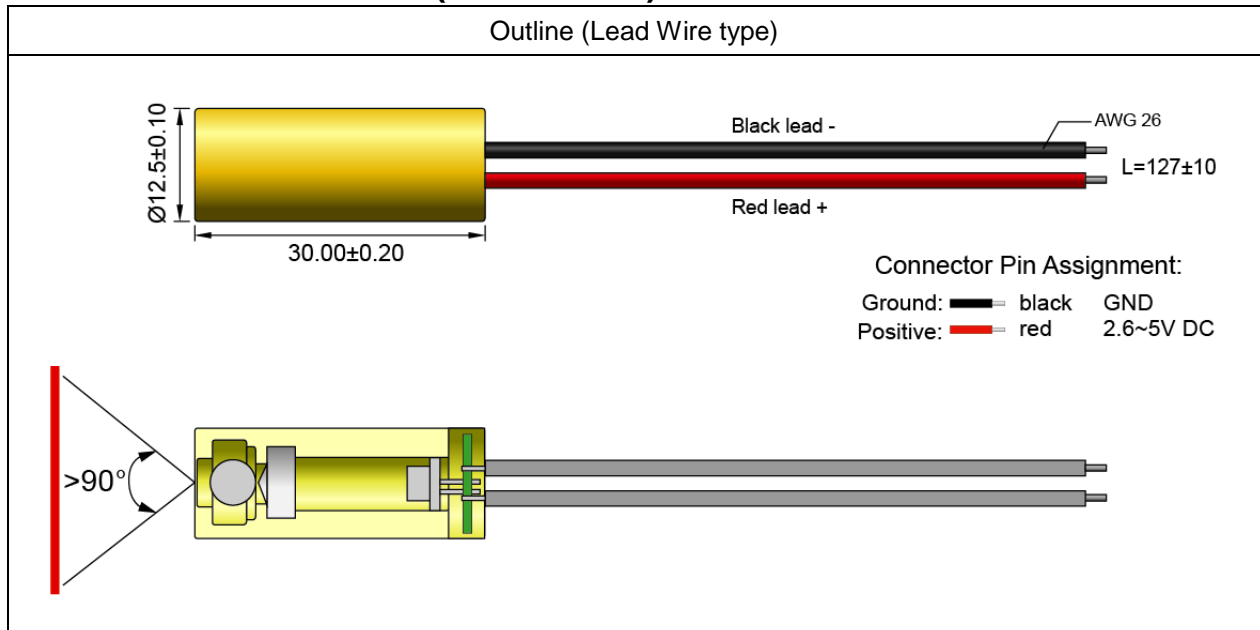
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SAFETY LABEL

CLASS I LASER PRODUCT

VLM-650-27 Series

OUTLINE DIMENSIONS (UNITS: mm)



SPECIFICATIONS

SPECIFICATIONS		VLM-650-27	
		LPT	LPT-30
1	Dimensions	Ø12.5 x 30 mm (Ø0.492" x 1.181")	
2	Operating voltage (Vop)	2.6~5 VDC	
3	Operating current (Iop)	Less than 35mA	Less than 100mA
4	Optical power*	Less than 2mW	12~15mW
5	Laser power output**	Less than 0.39mW	Less than 0.9mW
6	Laser class	Class 1M	Class 2M
7	Wavelength at peak emission (λp)	645~665nm	
8	Cylindrical lens	Quartz cylindrical lens	
9	Collimating lens	Aspherical plastic lens	
10	Beam shape	Line	
11	Laser Line width	3 ±0.5mm @5m, 6 ±0.5mm @10m	
12	Laser line accuracy	40" (± 1mm @5M)	
13	Emitting angle	More than 90°	
14	Operating temp. range***	+10°C ~+40°C	
15	Storage temp. range	-20°C ~+65°C	
16	Housing material	Brass	
17	Potential housing****	VDD(+)	

VLM-650-27 Series

18	Electrostatic discharge (ESD)	30KV
19	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.
20	Wire type	1007-26 AWG
21	Cable length	127±10mm
22	Mean time to failure (MTTF) 25°C	10000hrs

* Optical power is total power output measured at the aperture of the laser.

** According to FDA 1040.10 & IEC 60825-1 regulations, laser power output is measured by 7mm aperture stop from a 10 cm distance of the laser.

*** 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.

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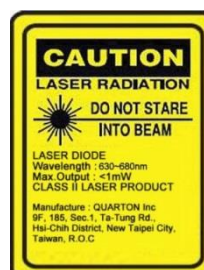
Order Code	Wavelength	Optical power*	Laser power output**	Laser Class	Connection Type
VLM-650-27 LPT	650 nm	Less than 2mW	Less than 0.39mW	Class 1M	Lead Wire
VLM-650-27 LPT-30	650 nm	12~15mW	Less than 0.9mW	Class 2M	Lead Wire

* Optical power is total power output measured at the aperture of the laser.

** According to FDA 1040.10 & IEC 60825-1 regulations, laser power output is measured by 7mm aperture stop from a 10 cm distance of the laser.

SAFETY LABEL

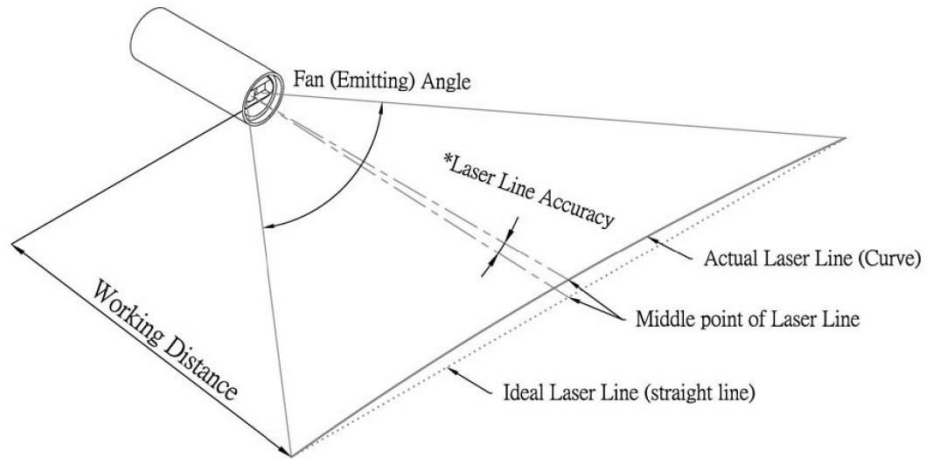
CLASS I LASER PRODUCT



VLM-635/650-27 Series

Annex A.

Laser Line Accuracy



*Laser Line Accuracy

The error angle between Ideal and Actual Laser Line at middle point.

For VLM-635/650-27 Series, Laser line accuracy < 40" (Arc Second) = $\frac{40}{3600}$ ° (Degree)

For VLM-635/650-37 Series, Laser line accuracy < 20" (Arc Second) = $\frac{20}{3600}$ ° (Degree)

For VLM-532-46 Series, Laser line accuracy < 20" (Arc Second) = $\frac{20}{3600}$ ° (Degree)