Quarton inc.

Industrial Use Line Laser

VLM-635-27 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: 635 nm
- Two laser power output: Class 1M / Class 2M
- Laser line accuracy: 40" (+/- 1mm @5m).
- Emitting Angle: >90°
- 2.6~6 VDC operation.
- Connection type : Lead wire

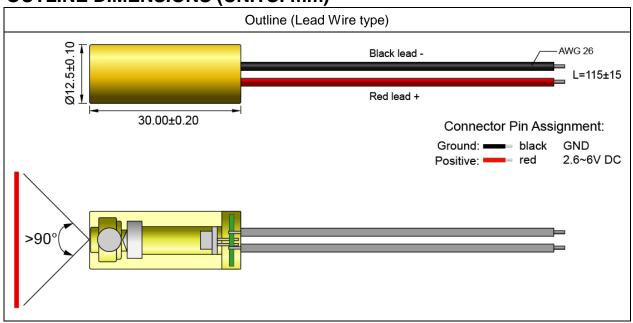
APPLICATIONS:

- 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.

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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)	2.6~6 VDC		
3	Operating current (lop)	Less than 50mA	Less than 55mA	
4	Optical power*	Less than 2mW	4~5mW	
5	Laser power output**	Less than	Less than 0.39mW	
6	Laser class	Class 1M		
7	Wavelength at peak emission (λp)	630~645nm		
8	Collimating lens	Plastic lens		
9	Line lens	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(+)		



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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	115±15mm		
22	Mean time to failure (MTTF) 25°C	10000hrs		
23	Application	General industrial alignment		
24	Suggestion work distance	Above 2 meters		

^{*} Optical power is total power output measured at the aperture 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	Laser Class	Connection
			output**		Туре
VLM-635-27 LPT	635 nm	Less than	Less than	Class 1M	Lead Wire
V LIVI-033-27 LI I		2mW	0.39mW		
VLM-635-27 LPT-10	635 nm	4~5mW	Less than	Class 1M	Lead Wire
V LIVI-033-27 LI 1-10			0.39mW		

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

SAFETY LABEL

CLASS I LASER PRODUCT

^{**} 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.

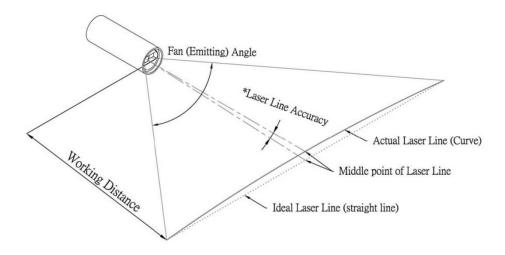
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Annex A.

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)