

## Industrial 3D-Scan Line module

### VLM-650-30 Series



#### FEATURES:

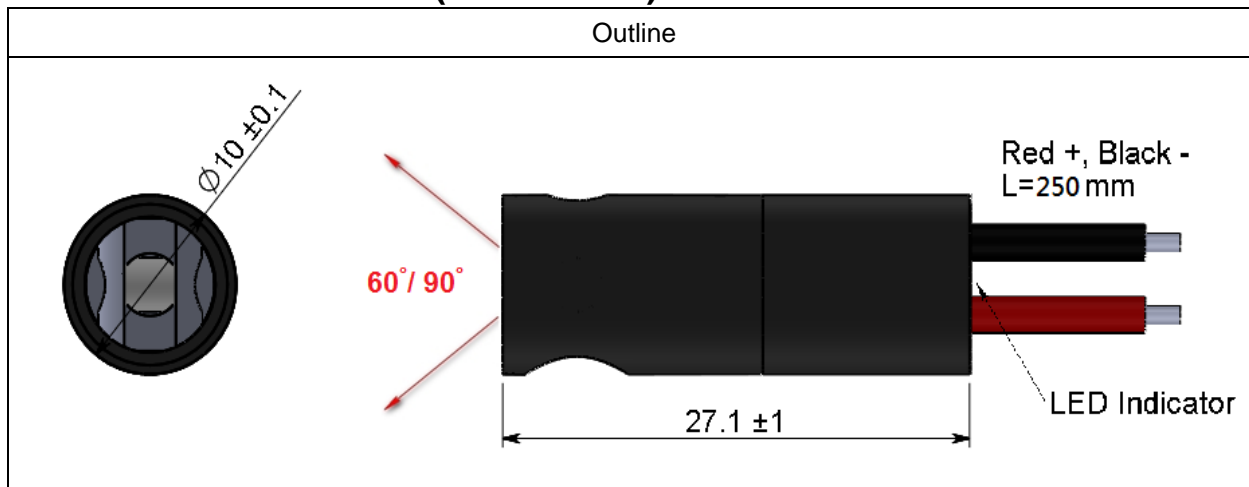
- Industrial 3D-Scan Red Line Laser.
- High contrast Gaussian line profile.
- Line thickness <1.2mm (60° type) at Working Range 50mm ~ 400mm.
- High Laser line accuracy : 4/1000(<1.6mm @400mm).
- This module has integrated quartz cylindrical lens, collimating lens, laser diode, and APC driver circuit.
- Advanced APC circuit to provide maximum stable laser output power.
- Dimensions:  $\Phi 10 \times 27.1$  mm ( $\Phi 0.394" \times 1.067"$ )
- Wavelength : 650 nm
- Output power (Center/Total) : less than 1mW / 5~20mW
- Fan Angle : 60° or 90°
- 5 V operation voltage.
- Connection type: Lead wire
- Built-in Laser Emissions indicator (LED)

#### APPLICATIONS:

- Specifically optimized for Industrial 3D scanner.
- High accuracy Red Straight Line Laser, Line-width optimize at short distance (50~400mm), for Industrial high-precision barcode reader, leveling, alignment, adjusting, measuring and targeting device.
- Wood processing.
- Metal processing.
- Stone processing.
- Textile industry.
- Food industry.
- Automotive industry.
- Medical science

## VLM-650-30 Series

### OUTLINE DIMENSIONS (UNITS: mm)



### SPECIFICATIONS

Items		VLM-650-30 LPT10(60°)	VLM-650-30 LPT10(90°)	VLM-650-30 LPT30(60°)	VLM-650-30 LPT30(90°)
1	Dimensions	φ10 x 27.1±1mm			
2	Weight	4.6g			
3	Housing Material	Aluminum with Black Anodized			
4	Exit Aperture Protection	Glass Window with AR Coating			
5	Lens Material	Aspherical Plastic + Glass (Rod lens)			
6	Emissions Indicator	Red LED Indicator			
7	Connection type	Lead Wires (L=250mm)			
8	Mode of operation	Auto Power Control (APC)			
9	Operating Voltage	5V			
10	Beam Shape	Line			
11	Modulation	Continuous wave (CW), Switching up to 1KHz			
12	Total Output power	5mW	5mW	20mW	20mW
13	Classification	Class 1M	Class 1M	Class 2M	Class 2M
14	Output power Stability(25°C)	Total Fluctuation <5%			
15	Output power VS. Temperature	< 0.5% / °C			
16	Wavelength (25°C)	650 ±15 nm			
17	Wavelength Stability	0.25~0.3 nm/°C			
18	Fan Angle	60°	90°	60°	90°
19	Line Intensity profile	Gaussian Line			
20	Working Range	50mm~400mm			
21	Line thickness (13.5%)	<1.2mm	<1.5mm	<1.2mm	<1.5mm
22	Beam alignment	<3°			
23	Housing Material	Aluminum			
24	Housing Color	Black			
25	Potential of Housing	Insulated			
26	Wire Type	UL1007-26AWG			



27	Cable length	250mm
28	Laser line accuracy	4/1000(<1.6mm @400mm)

Note : 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.

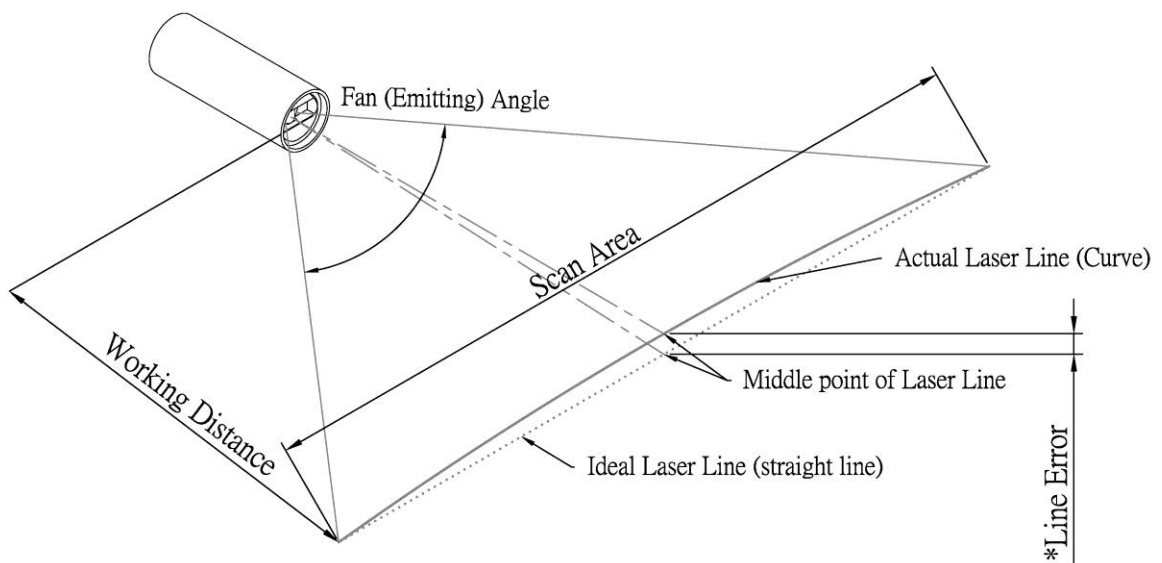
## VLM-650-30 Series

### ORDER CODE

Parts Name	Order Code	Wavelength (nm)	Total Output power (mW)	Fan Angle	Working Range	Line thickness (13.5%)	Laser line accuracy	Emissions Indicator
VLM-650-30 LPT10(60°)	250-43002G	650 ±15	5	60°	50mm~400mm	<1.2mm	4/1000	Red LED
VLM-650-30 LPT10(90°)	250-43003G	650 ±15	5	90°	50mm~400mm	<1.5mm	4/1000	Red LED
VLM-650-30 LPT30(60°)	250-43001G	650 ±15	20	60°	50mm~400mm	<1.2mm	4/1000	Red LED
VLM-650-30 LPT30(90°)	250-43004G	650 ±15	20	90°	50mm~400mm	<1.5mm	4/1000	Red LED

## Annex A.

### Laser Line Accuracy



$$*\text{Laser Line Accuracy} = \frac{\text{Line Error at middle point}}{\text{Scan Area}}$$

For VLM-650-30 Series, Laser line accuracy <  $\frac{4}{1000}$

For VLM-650-41 Series, Laser line accuracy <  $\frac{1}{100}$