Quarton inc.

Economical 3D-Scan Line module

VLM-650-41 Series

FEATURES:

- Economical 3D-Scan Red Line Laser.
- High contrast Gaussian line profile.
- Line thickness <1.2mm (60° type) at Working Range 50mm ~ 400mm.
- This module has integrated quartz cylindrical lens, collimating lens, laser diode, and APC driver circuit.
- APC circuit to provide maximum stable laser power output.
- Dimensions : Ø10 x 26 mm (Ø0.394" x 1.024")
- Wavelength : 650 nm
- Laser power output : less than 1mW.
- Fan Angle : 60° or 90°
- 5 VDC operation.
- Connection type: Lead wire

APPLICATIONS:

- Specifically optimized for consumer grade 3D scanner.
- Red Straight Line Laser, Line-width optimize at short distance (50~400mm), for consumer grade barcode reader, 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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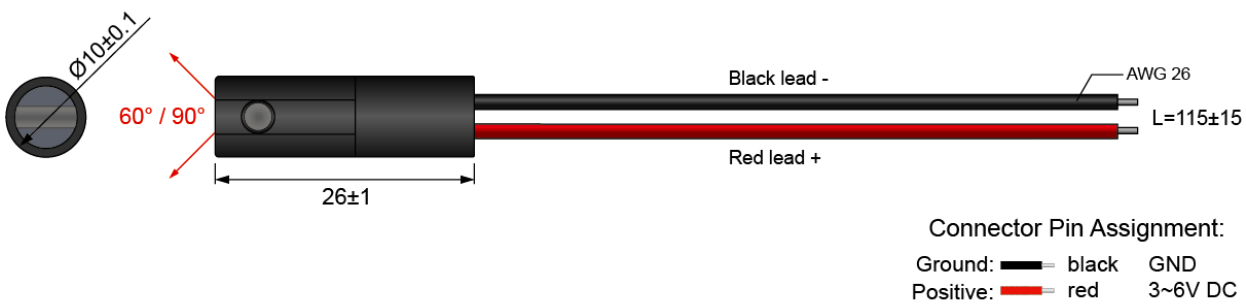
OUTLINE DIMENSIONS (UNITS: mm)

Outline (Lead Wire type)



SPECIFICATIONS

SPECIFICATIONS		VLM-650-41 LPT (60°)	VLM-650-41 LPT (90°)	VLM-650-41 LPT30(60°)	VLM-650-41 LPT30(90°)
1	Dimensions	Ø10 x 26 mm (Ø0.394" x 1.024")			
2	Lens Material	Aspherical Plastic + Glass (Rod lens)			
3	Mode of operation	Auto Power Control (APC)			
4	Operating Voltage	3~6V			
5	Modulation	Continuous wave (CW), Switching up to 1KHz			
6	Optical power*	2.5mW	2.5mW	20mW	20mW
7	Laser power output**	Less than 0.39mW	Less than 0.39mW	Less than 1mW	Less than 1mW
8	Laser class	Class 1M	Class 1M	Class 2M	Class 2M
9	Output power Stability(25°C)	Total Fluctuation <5%			
10	Output power VS. Temperature	< 0.5% / °C			
11	Wavelength	635~665 nm			
12	Wavelength Stability	0.25~0.3nm / °C			
13	Fan Angle	60°	90°	60°	90°
14	Line Intensity profile	Gaussian Line			
15	Working Range	50mm~400mm			
16	Line thickness (13.5%)	Less than 1.2mm	Less than 1.5mm	Less than 1.2mm	Less than 1.5mm
17	Beam alignment	Less than 3°			
18	Laser line accuracy	1/100			
19	Operating temp. range***	+15°C ~+40°C			
20	Storage temp. range	-20°C ~+65°C			

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21	Housing Material	Aluminum with Black Anodized
22	Potential of housing	Insulated
23	Electrostatic discharge (ESD)	30KV
24	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.
25	Wire type	1007-26AWG
26	Cable length	115±15mm
27	Application	Precision 3D scanner
28	Suggestion work distance	20~60 cm / 8"~24"

* **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.**

ORDER CODE

Order Code	Wavelength	Optical power*	Laser power output**	Laser Class	Connection Type
VLM-650-41 LPT(60°)	650 nm	Less than 2.5mW	Less than 0.39mW	Class 1M	Lead Wire
VLM-650-41 LPT(90°)	650 nm	Less than 2.5mW	Less than 0.39mW	Class 1M	Lead Wire
VLM-650-41 LPT30(60°)	650 nm	Less than 20mW	Less than 1mW	Class 2M	Lead Wire
VLM-650-41 LPT30(90°)	650 nm	Less than 20mW	Less than 1mW	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