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:

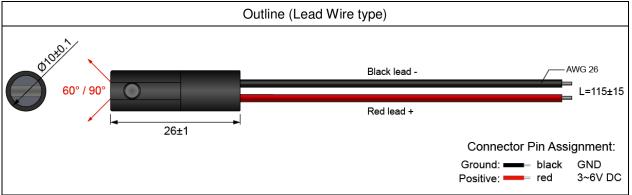
- Specifically optimized for consumer grade 3D scanner.
- Red Straight Line Laser, Line-width optimize at short distance (50~400mm), for consumer grade barcode reader, leveling, alignment, adjusting, positioning, measuring and targeting device.
- Wood processing.
- Metal processing.
- Stone processing.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

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VLM-650-41 Series

OUTLINE DIMENSIONS (UNITS: mm)



SPECIFICATIONS

| | | VLM-650-41 | VLM-650-41 | VLM-650-41 | VLM-650-41 |
|----|---|--|------------|------------|------------|
| | SPECIFICATIONS | LPT (60°) | LPT (90°) | LPT30(60°) | 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* | otical power* 2.5mW 2.5mW 20mN | | 20mW | 20mW |
| 7 | Laser power output** | Less than | Less than | Less than | Less than |
| 1 | | 0.39mW | 0.39mW | 1mW | 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 | Less than | Less than | Less than |
| 10 | | 1.2mm | 1.5mm | 1.2mm | 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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VLM-650-41 Series

| 21 | Housing Material | Aluminum with Black Anodized | | |
|----|---|------------------------------|--|--|
| 22 | Potential of housing | Insulated | | |
| 23 | Electrostatic discharge (ESD) | ostatic discharge (ESD) 30KV | | |
| 24 | Moisture sensitivity level (MSL) Level 1 - acc to JEDEC J-STD-020E. | | | |
| 25 | Wire type | 1007-26AWG | | |
| 26 | Cable length | ble 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 | 050 mm | Less than | Loss than 0.20m/M | Class 1M | Lead Wire |
| LPT(60°) | 650 nm | 2.5mW | Less than 0.39mW | | |
| VLM-650-41 | 650 nm | Less than | Less than 0.39mW | Class 1M | Lead Wire |
| LPT(90°) | | 2.5mW | | | |
| VLM-650-41 | 050 mm | Less than | Less than 1mW | Class 2M | Lead Wire |
| LPT30(60°) | 650 nm | 20mW | Less than Thiv | | |
| VLM-650-41 | 050 mm | Less than | Less than 1mW | Class 2M | Lead Wire |
| LPT30(90°) | 650 nm | 20mW | | | |

* 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



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