

25mW 850nm Line Laser Module

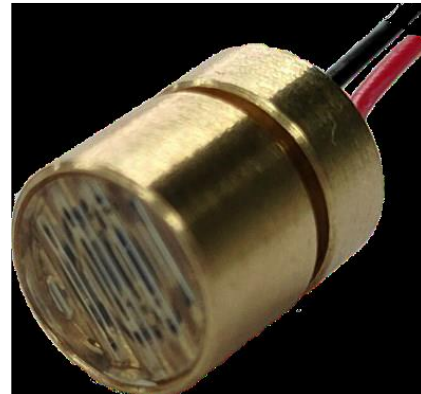
VM-0850F-025M-HL-0A0

Features

- Uniform and detail-oriented
- No stripes & No noise
- Compact, small size
- Low thermal resistance
- High power conversion efficiency

Applications

- Infrastructure alignment
- Medical and beauty application
- Indication and positioning
- Smart housing system
- Sweeping robot



Description

This product VM-0850F-025M-HL-0A0 is integrated by in-house manufactured & high-quality laser diode and is shielding with copper for better heat dissipation. Compared with traditional laser and LED, it enables to provide a higher peak power and lower power consumption, low wavelength drift with temperature and good reliability. It provides narrower emission angle without optical and thermal compensation, which allow to operate a wider range of environments. This product with laser diodes with small-sized, light, low price, long life, low power consumption and fast frequency response. It can be applied to infrastructure alignment, positioning, indication, inspection, machine vision and other fields for ideal invisible laser source.

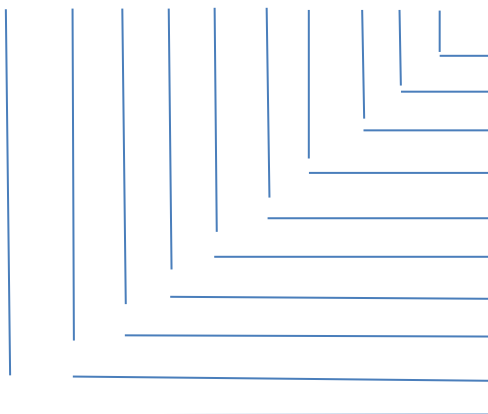
PRODUCT IDENTIFY

| Part Number | Description |
|----------------------|--|
| VM-0850F-025M-HL-0A0 | 850nm Line Shape Laser module, 5mm linewidth @20cm |

CODE RULES

VM- 0850F-025M -H L - 0 A 0

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩



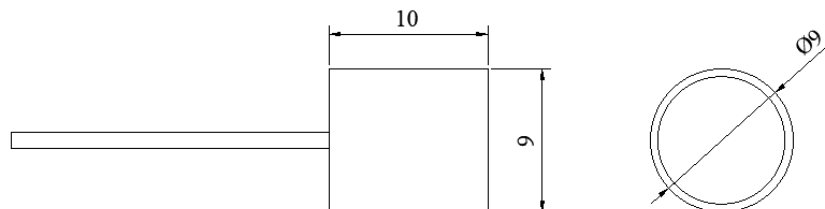
Annex, option=0
Product version, A
Accessories 0 = standard
Shape, L= Line
Angle, H = 140-170
Units, M =milliwatt
Power value, 25
Laser class: F=Class 1
Wavelength, 850nm
Product classification, **VCSEL Module**

I. Specifications

| Parameters | Typical values | Unit | Remarks |
|---------------------------|----------------------------------|------|---------------|
| Wavelength | 850 | nm | - |
| Optical power | 25±1 | mW | - |
| Beam line width | 3-5 | mm | @20cm |
| Beam spot | Line, horizontal angle 155°~165° | - | @20cm |
| Beam divergence | 1.2±0.1 | ° | - |
| Operating voltage | DC 2.0±0.1 | V | - |
| Rated current | <50 | mA | - |
| Power consumption | <95 | mW | - |
| Storage temperature | -40 to +85 | °C | - |
| Operating temperature | -40 to +105 | °C | - |
| Waterproof | IP20 | - | - |
| Dimensions | Φ9×L11 | mm | See Machanics |
| Positive electrical color | Red | - | - |
| Negative electrical color | Black | - | - |
| Laser classification | Class 1 | - | - |
| Lifetime | 50000 | H | - |
| Weight | - | g | Customizable |

Note: Electro-Optical Characteristic with a package or diffuser would require further evaluation. Values are based on limited sample size and estimated values.

II. Mechanic schematic (including 3.3V standard driver board)



III. Laser Product Safety

The output power of this module is classified as class 1, one can refer to IEC 60825-1:2014 《Laser Product Safety: Part 1: Devices classification, requirements and user's Manual》.

IV. Copyright Statement

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V. Revision History

| Revisions | Date | Description |
|-----------|-----------|----------------------------|
| V.01 | 2021/8/25 | The first official Version |

Laser diode product components are intended for use in a user-devised end system. However, these products are capable of emitting laser radiation. Extreme care must be exercised during their operation. Only persons familiar with the appropriate safety precautions should operate a laser product. Directly viewing the laser beam or exposure to specular reflections must be avoided. Serious injury may result if any part of the body is exposed to the beam. The eye is extremely sensitive to the infrared radiation and therefore, proper eye wear must be worn at all times. Use of optical instruments with these products may increase eye hazard. Always wear eye protection when operating.

