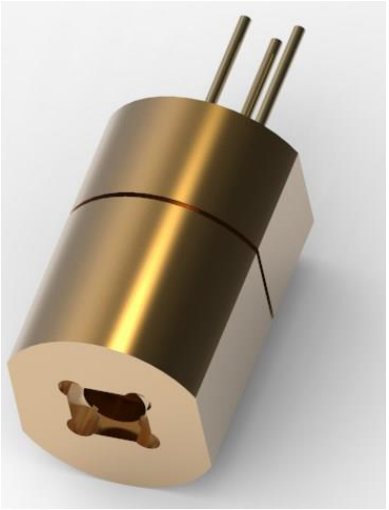
Tel: +852 2325 1078
Fax: +852 2325 1869
Email: info@brightlaser.com.hk
Website: www.brightlaser.com.hk

50mW 808nm Line Laser Module

VM-0808F-050M-GL-0A0

Features

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



Applications

- Machine vision
- 3D measurement
- Indication and positioning
- Smart housing system
- Sweeping robot

Description

This product VM-0808F-050M-GL-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-0808F-050M-GL-0A0	808nm Line Shape Laser module, Beam Divergence > 130°

CODE RULES

VM- 0808F-050M –G L – 0 A 0
① ② ③④⑤ ⑥⑦ ⑧⑨⑩

Annex, option=0
Product version, A
Accessories 0 = standard
Shape, L= Line
Angle, G = 110-140 degree
Units, M =milliwatt
Power value, 50
Laser class: F=Class 1
Wavelength, 808nm
Product classification, **VCSEL Module**

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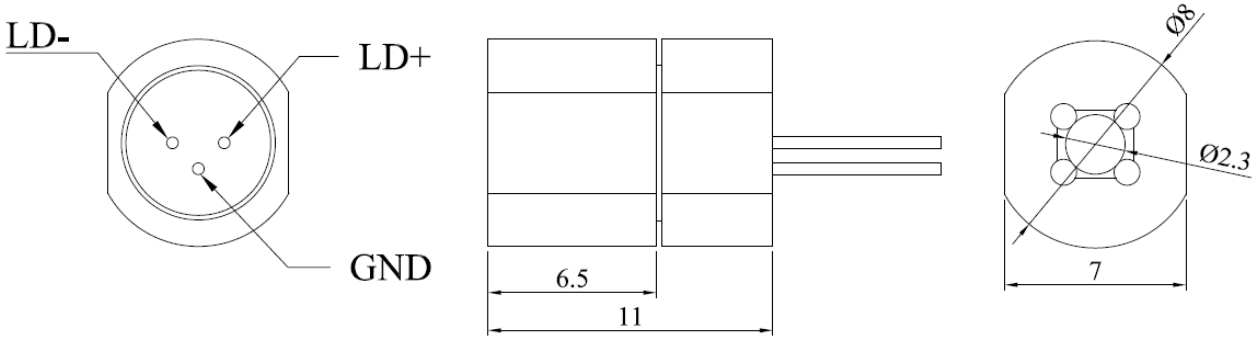
I. Specifications

Parameters	Typical values		Unit	Remarks
	CW Mode	Pulse Mode		
Wavelength	808±10		nm	-
Peak Optical power	50	100	mW	Pulse-width =3.6us, Duty Cycle= 40%
Rated current	50	110	mA	-
Power consumption	150	118	mW	Average power consumption
Operating voltage	DC2.2-2.5	DC2.68	V	-
Storage temperature	-40 to +85		℃	-
Operating temperature	-20 to +60		℃	-
Waterproof	IP20		-	-
Dimensions	Φ8×L11		mm	See Machanics
Beam spot	Line, linewidth ≤2mm		-	@100mm
Beam divergence	≥130		°	-
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



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

V. Revision History

Revisions	Date	Description
V.01	2021/12/01	The first official Version

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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.