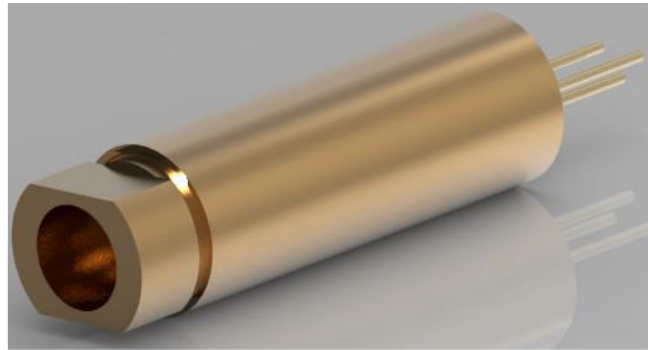


## 6mW 850nm Dot Laser Module

### VM-0850B-006M-AD-0A0

#### Features

- Uniform and detail-oriented
- No stripes & No noise
- Collimated beam
- Long distance indication
- Low thermal resistance
- High power conversion efficiency



#### Applications

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

#### Description

This product VM-0850B-006M-AD-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.

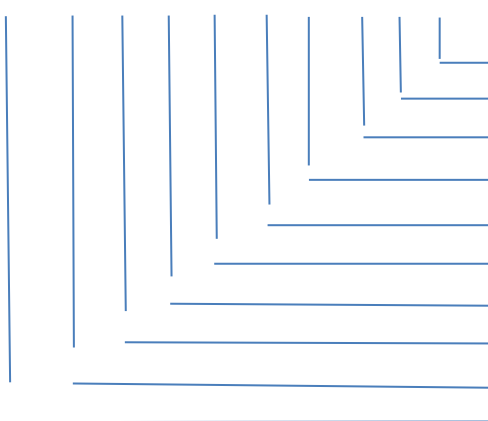
#### PRODUCT IDENTIFY

Part Number	Description
VM-0850B-006M-AD-0A0	6mW 850nmDot Shape Laser module

#### CODE RULES

VM- 0850B-006M -A D - 0 A 0

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩



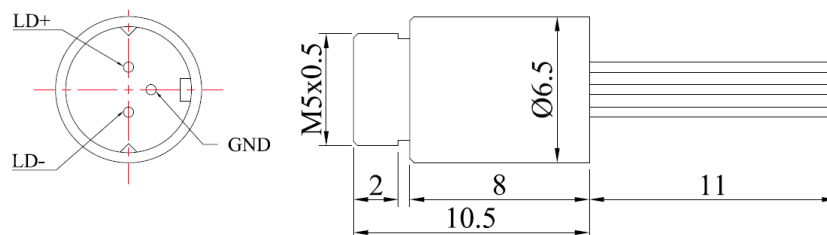
Annex, option=0  
Product version, A  
Accessories 0 = standard  
Shape, D = dot  
Angle, A = 0-5 degree  
Units, M =milliwatt  
Power value, 6  
Laser class: B=Class 3R  
Wavelength, 850nm  
Product classification, **VCSEL Module**

## I. Specifications

Parameters	Typical values	Unit	Remarks
Wavelength	850	nm	-
Optical power	3	mW	Light exit window
Rated current	8	mA	-
Operating voltage	DC 2.3±0.1	V	-
Beam spot	Dot	-	-
Beam emission angle	≤2	mrad	-
Power consumption	20	mW	-
Operating temperature	-20 to +60	°C	-
Storage temperature	-40 to +80	°C	-
Dimensions	Φ6.5×L22	mm	See Mechanics
Waterproof	IP20	-	-
Laser classification	Class 3R	-	Laser goggle when using
Weight	4.3	g	Reference value

**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 3R, one can refer to IEC 60825-1:2014 《Laser Product Safety: Part 1: Devices classification, requirements and user's Manual》.

## IV. Copyright Statement

This documentation is wholly owned by Brightlaser Ltd. Any one, any organization or third part may not partly or wholly copy, reproach the documentation. Otherwise, anyone can be prosecuted.

## V. Revision History

Revisions	Date	Description
V.01	2021/12/01	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.

