

# Laser Module

## LC-LMD-515-07-01-TM-01

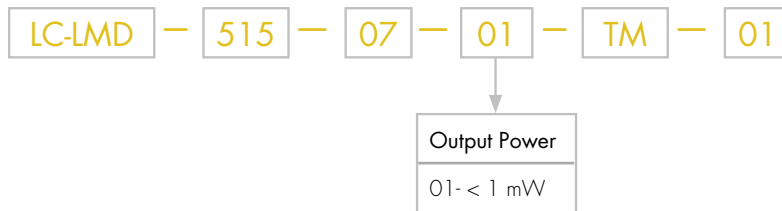
Ø 3.3 mm Smallest 515 nm Laser Module

### Features

1. APC (auto power control) IC inside
2. Low current consumption of the APC circuit
3. Much smaller LD module
4. Surge current protection
5. High quality lens for output beam



### Part No. Indications



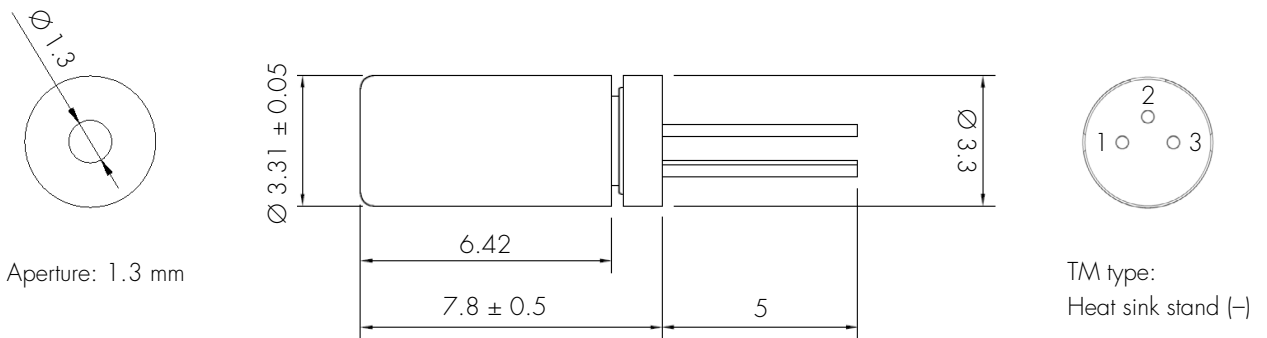
### Absolute Maximum Ratings

| Item                              | Symbol    | Rating | Unit |
|-----------------------------------|-----------|--------|------|
| Power supply voltage              | $V_{CC}$  | 7      | V    |
| Laser module optical output power | $P_o$     | 1      | mW   |
| Operation temperature             | $T_{opr}$ | 0 ~ 50 | °C   |
| Storage temperature               | $T_{stg}$ | 0 ~ 85 | °C   |

### Electrical and Optical Characteristics ( $T_c = 25\text{ }^\circ\text{C}$ )

| Item                         | Symbol    | Min. | Typ. | Max     | Unit | Condition                                   |
|------------------------------|-----------|------|------|---------|------|---|
| Wavelength                   | $\lambda$ | 510  | 520  | 530     | nm   | $P_o = 0.8\text{ mW}$                       |
| Operation current            | $I_{op}$  | -    | -    | 100     | mA   | $P_o = 0.8\text{ mW}$ $V_{cc} = 6\text{ V}$ |
| Optical output power         | $P_{out}$ | 0.5  |      | 0.9     | mW   |   |
| Operation voltage            | $V_{op}$  | -    | 6    | 6.5     | Volt |   |
| PWM control mode             | PWM       | 100  |      | 2000    | KHz  | Add 10 uf capacitance<br>Duty cycle = 50%   |
| laser beam spot size at 10 m |           |      |      | < 20 mm |      |   |
| Divergence angle             |           |      |      | 2 mrad  |      |   |

### Outline Dimensions (Units: mm)



### Pin Assignment

Pin 1:  $V_{cc}$   
Pin 2: GND  
Pin 3: PWM

1. Do not look into the laser beam directly by eyes. The laser beam may cause severe damage to human eyes.
2. Optical lens is made of glass. Do not contaminate lens by soiling, oil or chemical.

