

## LT-LM-PUMP-698-10~100M-B

Laser Module/Pump Laser/698nm/10~100mW



### ■ Features

- 698 Red Laser
- Internal Drive & TEC
- Collimated Beam

### ■ Applications

- Thermal Printing
- Material Inspection
- Scanning Biochemistry

### ■ Absolute Maximum Ratings

| Parameter             | Symbol           | Value   | Unit |
|-----------------------|------------------|---------|------|
| Operating Temperature | T <sub>opr</sub> | 20 ~ 30 | °C   |
| Storage Temperature   | T <sub>stg</sub> | 10 ~ 50 | °C   |
| MTTF                  | —                | 10000   | Hrs  |
| Warm Up Time          | —                | < 5     | Min  |

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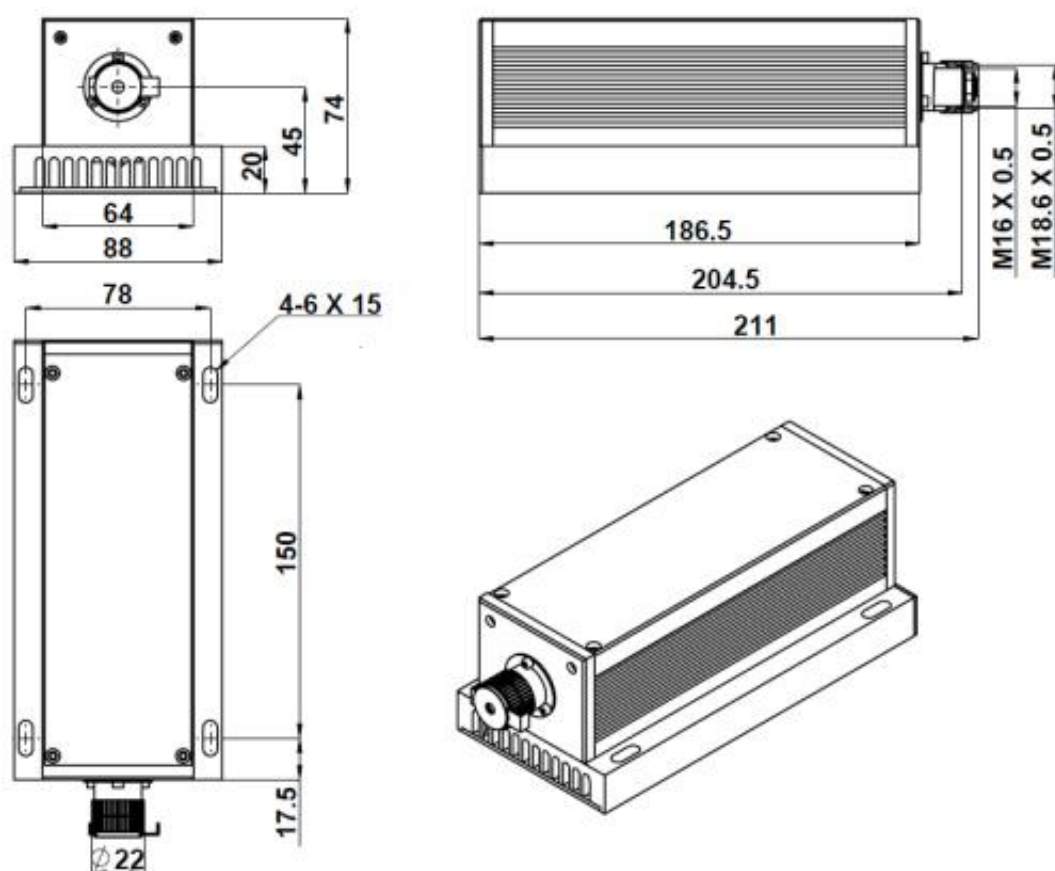
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## ■ Optical and Electrical Characteristics (Tc=25°C)

| Parameter                          | Symbol      | Value                                   | Unit |
|------------------------------------|-------------|-----------------------------------------|------|
| Center Wavelength                  | $\lambda_c$ | 698                                     | nm   |
| Wavelength Tolerance               | $\lambda_c$ | $\pm 1$                                 | nm   |
| Optical Output Power               | Po          | 10 , 20 , 100 ,<br>Selectable           | mW   |
| Spatial Pattern                    | —           | TEM00                                   | —    |
| M <sup>2</sup> Factor              | —           | < 2                                     | —    |
| Beam Divergence, Full Angle        | —           | 1.0                                     | mrad |
| Beam Diameter(1/e <sup>2</sup> )   | —           | 2.0                                     | mm   |
| Pointing Stability                 | —           | < 0.05                                  | mrad |
| Beam Spot Shape                    | —           | Circular, aspect ratio < 1.5:1          | —    |
| Power Stability(Rms, Over 4 Hours) | —           | < $\pm 5\%$                             | —    |
| Working Condition                  | —           | CW or Modulation                        | —    |
| Laser -Drive Mode                  | —           | CW , Analog Signal<br>or TTL upto 30kHz | —    |
| Drive Power Input                  | —           | AC 85 ~ 265                             | V    |
| Outline Dimensions                 | —           | 211*88*74                               | mm   |

■ Outline Dimensions(Unit:mm)



## ■ Power Supply Specifications

### B. Laser with Lab type power supply



## ■ Cautions

1. Laser light can damage the human eye and skin. Do not expose the eye and skin to any laser light directly or through optical lenses. Focused laser beam through optical instruments will increase the chance of eye hazard.
2. The laser needs a stable driver to avoid surges. The instantaneous reverse current and reverse voltage should not exceed the absolute maximum ratings, otherwise it will damage the laser diode.
3. Semiconductor lasers are sensitive to temperature, working at high temperatures will reduce the photoelectric conversion efficiency and accelerate the aging of laser diode. It should be used under adequate heat dissipation or cooling conditions.
4. The laser should be used at the rated current and rated power, the output power is too high will accelerate the aging of laser diode.
5. Semiconductor lasers are electrostatic sensitive devices, anti-static measures should be taken during storage and transportation.
6. Lasers should be stored or work in a dry, ventilated environment to prevent damage to the laser from condensation.
7. The light emitting surface (cavity surface) is the key parts of the laser diode, any handling to damage the cavity surface should be strictly prohibited. It should be ensured that the laser diode is not contaminated, and damaged in mechanical.
8. The fiber should not be bent at large angles, it should be ensured that the diameter of the bend should be more than 300 times the diameter of the fiber.

