

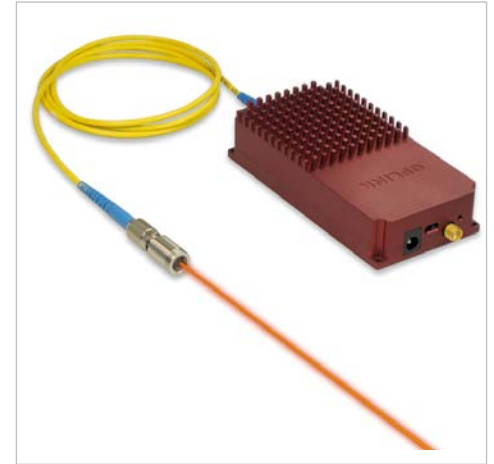
# FIBER COUPLED LASER MODULE (830 NM)

## FCLM830 Series

The FCLM™ Laser Module is a temperature stabilized semiconductor laser coupled with single mode fiber. It features very low M<sup>2</sup> value Gaussian beam output with excellent beam pointing stability at a wide temperature dynamic range. The unique designed electrical driver enable this optical engine has the lowest power consumptions compare to the similar product in the industry. The FCLM™ Laser Module is a Class III b laser product

### Performance Specification

|                                   | Condition      | Min                          | Typ                    | Max | Unit    |
|-----------------------------------|----------------|------------------------------|------------------------|-----|---------|
| <b>Optical Performance</b>        |                |                              |                        |     |         |
| Wavelength                        | T= 25°C        |                              | 830                    |     | nm      |
| Output Power                      | T= 25°C        |                              | 20                     |     | mW      |
| Noise(RMS)                        | 10~20 MHz      |                              | 0.1                    | 0.3 | %       |
| Power Stability                   | 1hrs, T= 25°C  |                              | 0.25                   | 0.5 | %       |
| Power Stability                   | 24hrs, T= 25°C |                              | 0.75                   | 1   | %       |
| Polarization Extinction Ratio     |                | 15                           |                        |     | dB      |
| <b>Collimated Beam Parameters</b> |                |                              |                        |     |         |
| M2                                |                |                              |                        | 1.2 |         |
| Beam Diameter                     | 1/e2           | 0.7, 0.9, 1.5, 2.0, 4.0, 6.0 |                        |     | mm      |
| Beam Divergence                   | full angle     |                              |                        | 1   | mrad    |
| Pointing Stability                | 2hrs, T= 25°C  |                              |                        | 5   | urad    |
| Pointing Stability                |                |                              |                        | 1   | urad/°C |
| <b>Fiber Information</b>          |                |                              |                        |     |         |
| Length                            |                |                              | 1, 2, 3                |     | m       |
| Fiber Type                        |                |                              | SM / PM                |     |         |
| Mode Field Diameter               |                |                              | 3                      |     | um      |
| NA                                |                |                              | 0.12                   |     |         |
| Fiber Jacket Diameter             |                |                              | 3                      |     | mm      |
| <b>Electrical Parameters</b>      |                |                              |                        |     |         |
| Power Supply                      |                |                              | 9                      |     | V       |
| Power Consumption                 |                |                              | 3                      | 10  | W       |
| Current(TEC)                      |                |                              |                        | 2   | A       |
| Current(LD)                       |                |                              |                        | 200 | mA      |
| Temperature Stability             |                |                              | 0.2                    |     | °C      |
| Control                           |                |                              | ACC                    |     |         |
| Power Setting                     |                |                              | 0% ~ 100% output power |     |         |
| <b>Environmental Conditions</b>   |                |                              |                        |     |         |
| Storage Temperature               |                |                              | 0 to + 50              |     | °C      |
| Operation Temperature             |                |                              | + 10 to + 40           |     | °C      |
| Operation Humidity                |                |                              | No Condensing          |     |         |
| Package Dimensions *              |                |                              | 112 x 56 x 26.5        |     | mm      |



### Features

- ◆ Plug & Play
- ◆ ESD Protection
- ◆ Power Adjustable
- ◆ LD Current Full Protection
- ◆ LD Temperature Stabilized
- ◆ Compact Size

### Applications

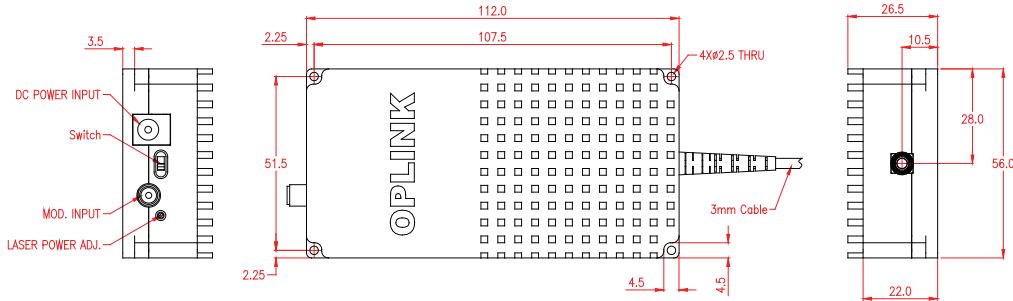
- ◆ Polarization Maintaining Fiber
- ◆ High Speed Modulation
- ◆ Remote Control
- ◆ Collimated & Focused Beam
- ◆ Metal Jacket Protection

Note:

\* The mechanical tolerance should be +/-0.2 mm on all package dimensions unless otherwise custom specified.

**FCLM830 SERIES**

**Mechanical Drawing / Package Dimensions (dimension in mm)**

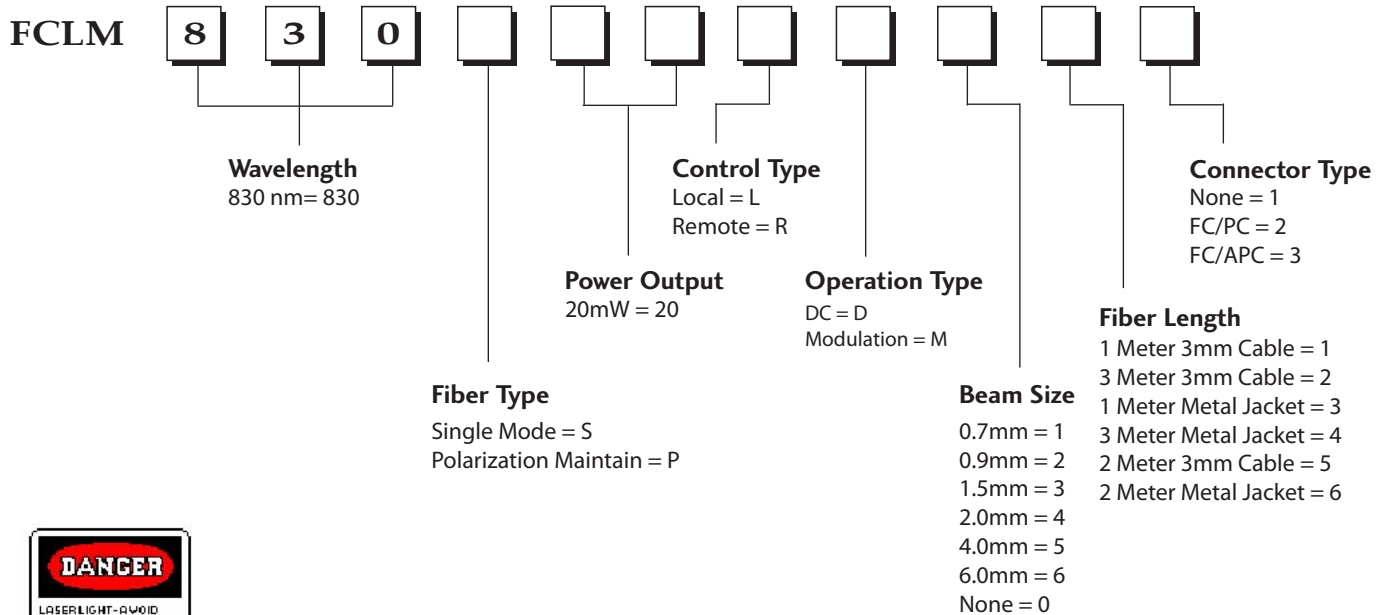


NOTES: (UNLESS OTHERWISE SPECIFIED)

1. ALL DIMENSIONS ARE IN MILLIMETER.
2. MAT'L AND FINISH: AL6061, ANODIZED.
3. TOL: .X = ±0.2, .XX = ±0.1

**Ordering Information**

Oplink can provide a remarkable range of customized optical solutions. For detail, please contact Oplink's OEM design team or account manager for your requirements and ordering information (510) 933-7200.



This component does not comply with the Federal Regulations (21 CFR Subchapter 1) as administered by the Center for Devices and Radiological health. Purchaser acknowledges that his/her products must comply with these regulations before they can be sold to a customer. The output light from this product is harmful to a human body even if it is invisible. Avoid looking at the output of this product directly, or through a lens during operation. Observance of operation should be through a TV camera or related equipment. Refer to IEC 825-1 and 21 CFR 1040.10-1040.11 as a radiation safety standard for laser products.

Oplink follows a policy of continuous product improvement. Specifications are subject to change without prior notice. The module's warranty is 1 year.

R03.20090331