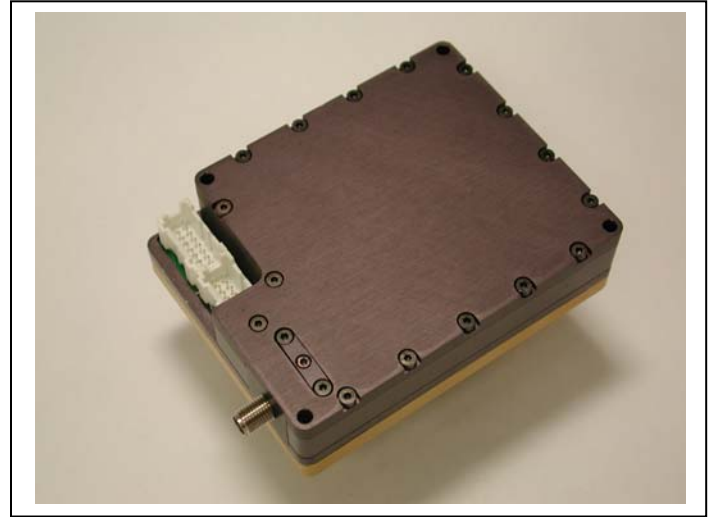


## High Power Fiber Coupled Laser

Princeton Lightwave's high power laser module features an advanced MQW chip design, innovative opto-mechanical packaging and high brightness. High optical power output is delivered in multiple fiber options. This product offering is ideal for medical and defense applications.

### Features & Options

- High Power, High Brightness
- 14XX , 15XX, 19XX nm Wavelength Options
- Detachable Fiber, 100  $\mu\text{m}$  – 400  $\mu\text{m}$ , 0.15NA, 0.22NA
- Blast Shield
- 635 nm Red Pilot Laser (Standard), Green Laser Option
- Fiber Sensor
- Dual Optical Power Monitors
- Built in thermistor for chip temperature control
- Spectral stabilization option



### ELECTRO-OPTICAL SPECIFICATIONS

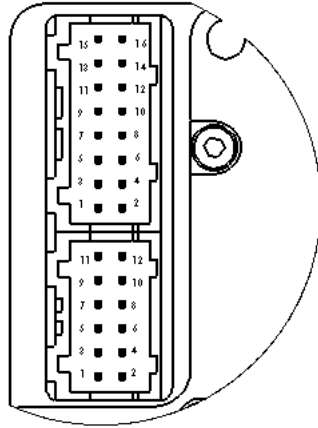
(at thermistor operating temperature,  $T_{op} = 20^{\circ}\text{C}$ , without spectral stabilization)

**NOTE:** Maximum ratings for short term operation is 20A max (14XX, 15XX nm) and 9A max (19XX nm) for operating current, and  $30^{\circ}\text{C}$  max. for thermistor temperature.

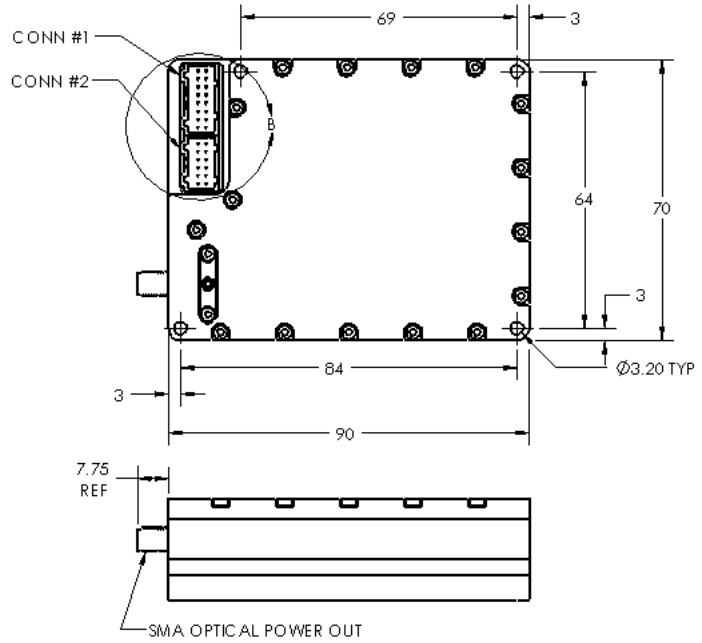
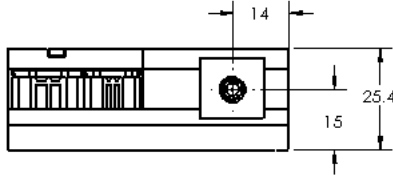
| Center Wavelength (nm)     | Spectral Width (nm)  | Operating Power (W) | Peak Wall Plug Efficiency (typ., %) | Forward Operating Current (A) | Forward Operating Voltage (V) | Fiber Type                  |
|----------------------------|----------------------|---------------------|-------------------------------------|-------------------------------|-------------------------------|-----------------------------|
| 1470 +/- 15<br>1530 +/- 15 | 16 (typ)<br>20 (max) | 20                  | 28                                  | 14 - 20                       | 6                             | 200 $\mu\text{m}$ , 0.22 NA |
|                            |                      | 35*                 | 28                                  | 17 - 20                       | 8.7                           | 400 $\mu\text{m}$ , 0.22 NA |
|                            |                      | 30                  | 30                                  | 17 - 20                       | 7.5                           | 400 $\mu\text{m}$ , 0.22 NA |
|                            |                      | 20                  | 30                                  | 13 - 20                       | 6                             | 400 $\mu\text{m}$ , 0.22 NA |
|                            |                      | 15                  | 30                                  | 13 - 20                       | 4.5                           | 400 $\mu\text{m}$ , 0.22 NA |
| 1905 +/- 15                | 20 (typ)<br>25 (max) | 5                   | 11                                  | 7 - 9                         | 7.5                           | 200 $\mu\text{m}$ , 0.22 NA |
|                            |                      | 5                   | 11                                  | 6 - 9                         | 8.5                           | 100 $\mu\text{m}$ , 0.22 NA |

\* may not be available with pointing laser and monitor options

## MECHANICAL SPECIFICATIONS



DETAIL B  
SCALE 3:1



| CONNECTOR #1<br>Laser Diode |             | CONNECTOR #2 |   |
|-----------------------------|-------------|--------------|---|
| 1                           | Cathode (-) | 1            | Fiber detector VCC (+)<br>(optional)            |
| 2                           | Cathode (-) | 2            | Monitor Photodiode 2 Anode<br>(optional)        |
| 3                           | Cathode (-) | 3            | Fiber detector Output<br>(optional)             |
| 4                           | Cathode (-) | 4            | Monitor Photodiode common cathode<br>(optional) |
| 5                           | Cathode (-) | 5            | Fiber Detector Common (-)<br>(optional)         |
| 6                           | Cathode (-) | 6            | Pilot Laser Sensor Anode<br>(optional)          |
| 7                           | Cathode (-) | 7            | NC  |
| 8                           | Cathode (-) | 8            | Pilot Laser Common (+)<br>(optional)            |
| 9                           | Anode (+)   | 9            | Thermistor                                      |
| 10                          | Anode (+)   | 10           | Pilot Laser Cathode (-)<br>(optional)           |
| 11                          | Anode (+)   | 11           | Thermistor                                      |
| 12                          | Anode (+)   | 12           | Monitor Photodiode 1 Anode<br>(optional)        |
| 13                          | Anode (+)   |              |   |
| 14                          | Anode (+)   |              |   |
| 15                          | Anode (+)   |              |   |
| 16                          | Anode (+)   |              |   |

Specifications subject to change without notice

## ORDERING INFORMATION

### **PML-6ww-xx-yy-zz**

**ww** 47 = 1470nm wavelength  
53 = 1530nm wavelength  
85 = 1850nm wavelength  
90 = 1905nm wavelength

### **xx-yy**

#### **For 1470nm and 1530nm lasers:**

20-20 = 20W, 200  $\mu$ m, 0.22 NA fiber  
35-40 = 35W, 400  $\mu$ m, 0.22 NA fiber  
30-40 = 30W, 400  $\mu$ m, 0.22 NA fiber  
20-40 = 20W, 400  $\mu$ m, 0.22 NA fiber  
15-40 = 15W, 400  $\mu$ m, 0.22 NA fiber

#### **For 1905nm lasers:**

05-20 = 5W, 200  $\mu$ m, 0.22 NA fiber  
05-10 = 5W, 100  $\mu$ m, 0.22 NA fiber

**zz** options per customer requirement