

## 2CM Packaged Laser Diode

High Power Multi-Mode SemiNex Lasers  
 12xx to 19xx nm  
 Custom Wavelengths Available  
 Fiber Coupled

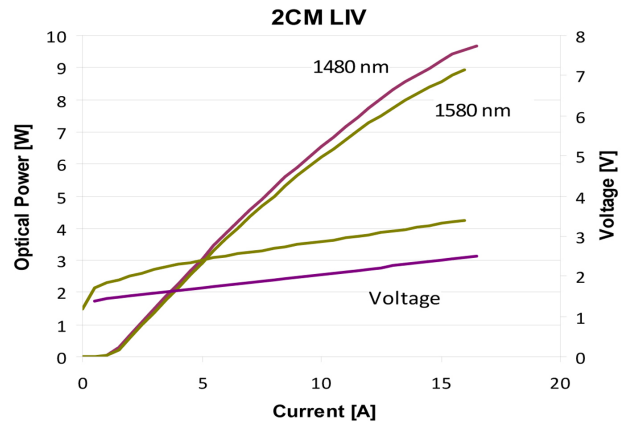
### Applications

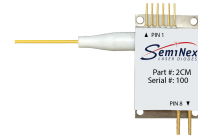
- Professional Medical
- DPSS pump source
- LiDAR
- Free Space Communications
- Military / Aerospace

### Features

- Two Laser Chip Package
- Cost effective fiber coupled design
- High Output Power
- High Dynamic Range
- High Efficiency
- Standard Low Cost Package

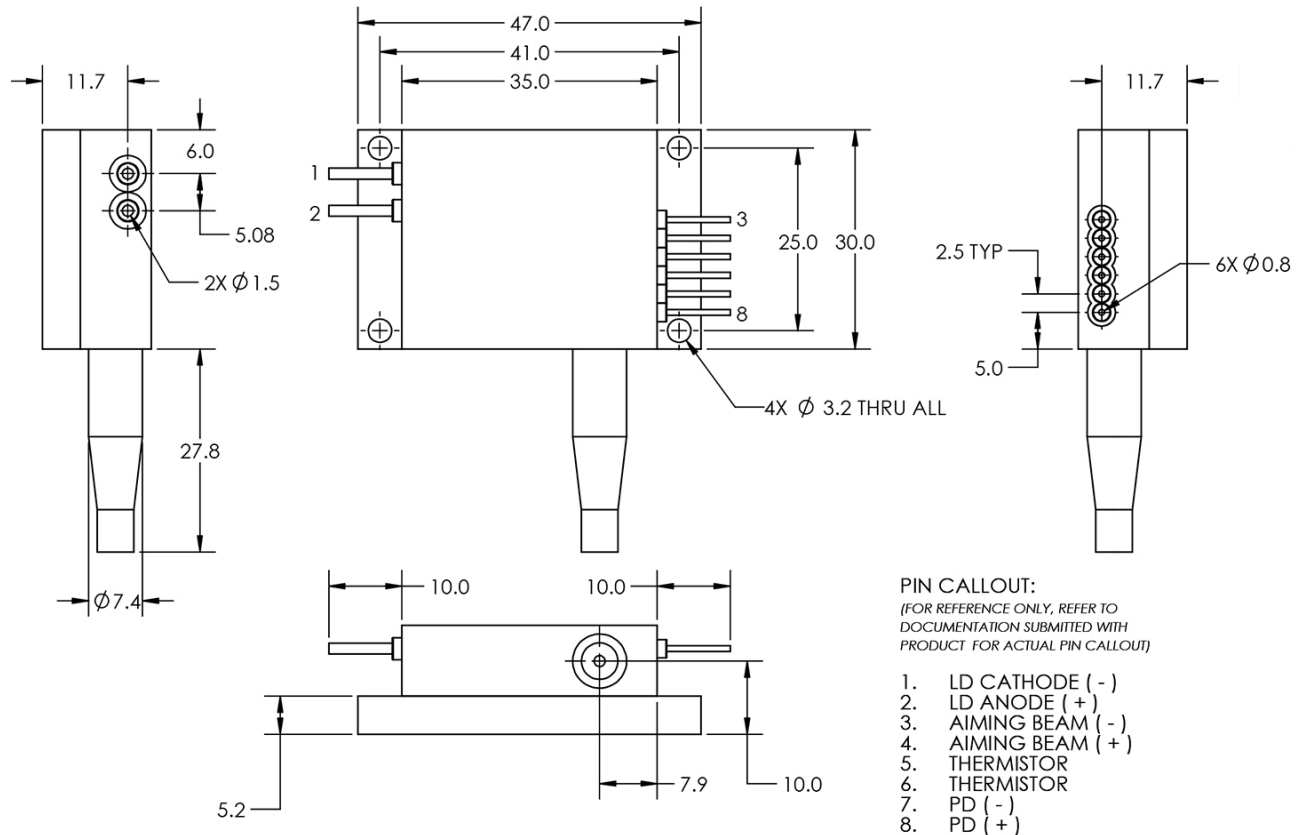
SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary we will further optimize the design of our InP laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements.





|                         | Symbol             | 2CM-103   | Units                |
|-------------------------|--------------------|-----------|----------------------|
| <b>Optical</b>          |                    |           |                      |
| Center Wavelength       | $\lambda_c$        | 1460      | nm ( $\pm 20$ )      |
| Output Power (CW)       | $P_o$              | 6.50      | watts ( $\pm 10\%$ ) |
| Spectral Width          | $\delta\lambda$    | 10        | nm 3dB               |
| Slope Efficiency        | $\eta_s$           | 0.6       | W/A                  |
| Optical Fiber Core Dia. | $\eta_c$           | 105       | $\mu\text{m}$        |
| Optical Fiber NA        |                    | 0.22      |                      |
| Fiber Length            |                    | 1         | meters               |
| Connector               |                    | SMA905    |                      |
| <b>Electrical</b>       |                    |           |                      |
| Power Conversion Eff.   | $\eta$             | 18.00     | %                    |
| Threshold Current       | $I_{th}$           | 0.5       | A                    |
| Operating Current       | $I_{op}$           | 10.5      | A                    |
| Operating Voltage       | $V_{op}$           | 3.1       | V                    |
| Lead Soldering Temp.    | $^{\circ}\text{C}$ | 250       | $^{\circ}\text{C}$   |
| <b>Aiming Beam</b>      |                    |           |                      |
| Output Power            | $P_a$              | 2         | mW                   |
| Wavelength              | $\lambda_a$        | 635       | nm                   |
| Operating Current**     | $I_{op}$           | 65        | mA                   |
| Voltage Limit           | $V_{max}$          | 2.3       | V                    |
| <b>Mechanical</b>       |                    |           |                      |
| Weight                  |                    | 170       | g                    |
| Operating Temp.**       |                    | -40 to 60 | $^{\circ}\text{C}$   |
| Storage Temp.           |                    | -40 to 80 | $^{\circ}\text{C}$   |
| <b>Thermistor</b>       |                    |           |                      |
| Thermistor Constant     | $\beta$            | 3477      | $\beta$              |
| Thermistor Resistance   | R                  | 10000     | K ohm                |

Specified values are rated at a constant heat sink temperature of 20°C.  
 \*\*Specified operating conditions are based on 20C heat sink temperature. High temperature operation will reduce performance and MTTF.  
 Unless otherwise indicated all values are nominal.



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SemiNex Corporation • 153 Andover St • Danvers, MA 01923 • 978-326-7700 • Email: [info@seminex.com](mailto:info@seminex.com) • [www.seminex.com](http://www.seminex.com)

