

High Power Laser Diode 4CM Fiber Module



Part Number: 4CM-107

High Power 4CM Fiber Coupled Module
Multi-Mode Fabry-Perot
CW Wavelength at 1550nm



Features

- High Output Power
- High Dynamic Range
- High Efficiency
- 4CM Fiber Coupled Module
- Cost Effective
- Red Aiming Beam
- Thermistor
- Custom Wavelengths Available

Application

- Defense / Aerospace



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 & GaSb 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.

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Specification

4CM-107



| Optical | Symbol | Typ. | Units |
|-------------------------|-----------------|-----------|----------------------|
| Center Wavelength | λ_c | 1550 | nm (± 20) |
| Output Power (CW)* | P_{out} | 16 | Watts ($\pm 10\%$) |
| Spectral Width FWHM | $\Delta\lambda$ | 20 | nm |
| Slope Efficiency | η | 1 | W/A |
| Optical Fiber Core Dia. | | 400 | μm |
| Optical Fiber NA | | 0.22 | |
| Electrical | Symbol | | Units |
| Power Conversion Eff. | η | 20 | % |
| Operating Current | I_{op} | 14 | A |
| Threshold Current | I_{TH} | 1.2 | A |
| Operating Voltage | V_{op} | 5.4 | V |
| Aiming Beam | Symbol | | Units |
| Output Power | P_a | 2 | mW |
| Wavelength | λ_a | 635 | nm |
| Operating Current | I_{op} | 50 | mA |
| Voltage Limit | V_{max} | 2.2 | V |
| Mechanical | | | Units |
| Connector Type | | SMA905 | |
| Fiber Length | | 1.5 | meters |
| Thermistor | | | |
| Thermistor Constant | | 3477 | β |
| Thermistor Resistance | | 10 | K ohm |
| | | Range | |
| Operating Temp.** | | -40 to 60 | $^{\circ}\text{C}$ |
| Storage Temp. | | -40 to 80 | $^{\circ}\text{C}$ |

*Specified values are rated at a constant heat sink temperature of 20°C.

**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

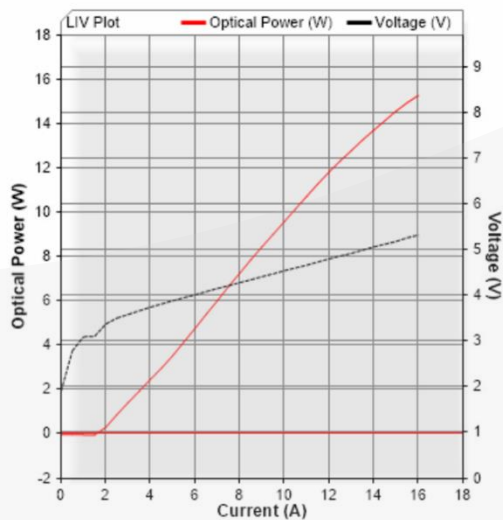
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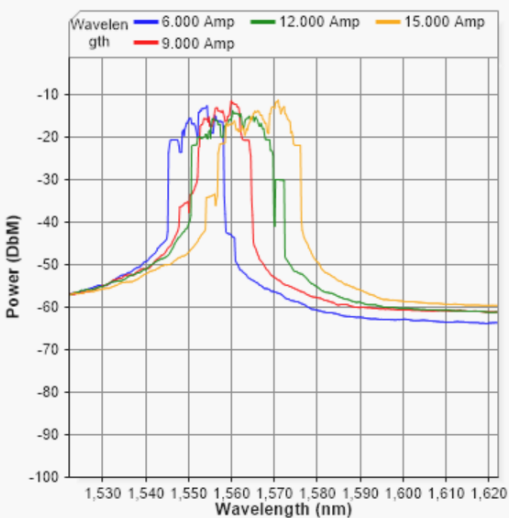
SemiNex Laser Diodes 4CM-107

Graphs & Data

Typical 4CM L-I-V Characteristics



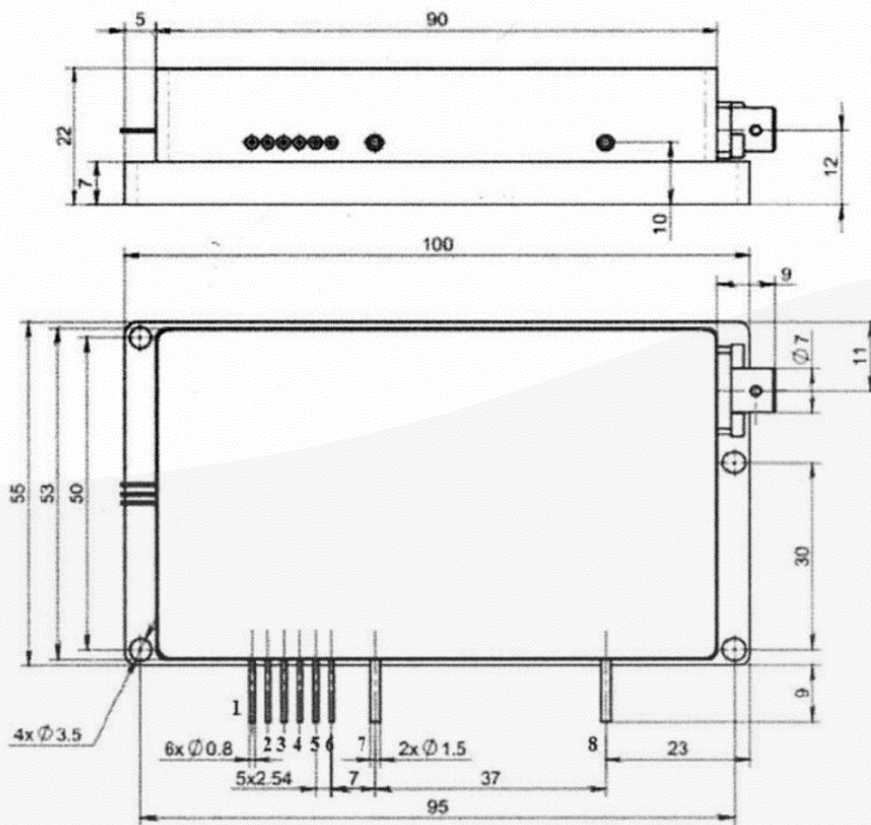
Typical 4CM Output Spectrum



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Mechanical Drawing



| Pins | Function |
|------|---------------|
| 1 | PD (P) * |
| 2 | PD (N) * |
| 3 | Red Aim (+) |
| 4 | Red Aim (-) |
| 5 | Thermistor* |
| 6 | Thermistor* |
| 7 | LD (-) |
| 8 | LD (+) |

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