# 2CM — 2 Chip Laser Module

High Power Multi-Mode SemiNex Lasers
Up to 8 watts CW Power
1470 nm
Custom Wavelengths Available
Fiber Coupled

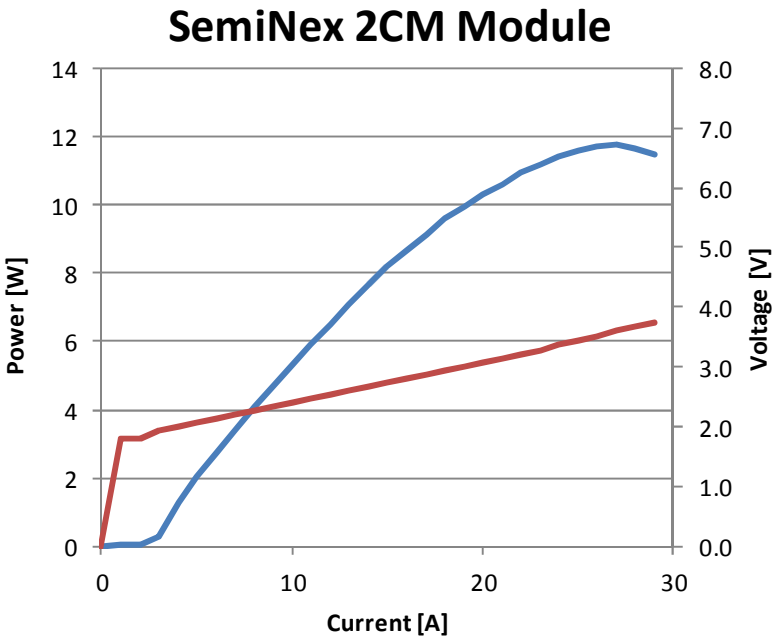

## Features

- High output power
- High dynamic power range
- High efficiency
- Standard Low Cost Package

## Applications

- Medical laser equipment
- DPSS pump lasers
- Military / Aerospace

SemiNex delivers the highest available power at infrared wavelengths between 13xx and 17xx 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




Preliminary

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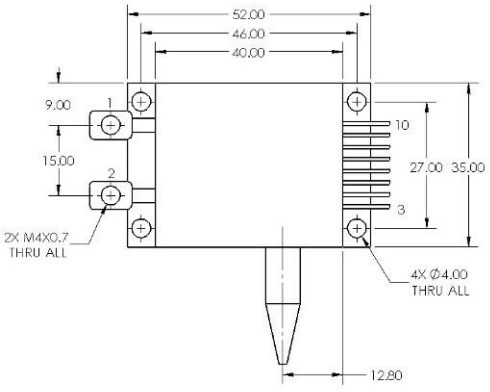
# 2CM

SemiNex LASER DIODES

Preliminary

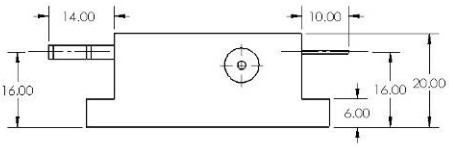
| | Symbol | 2CM-105 | 2CM-103 | 2CM-101 | 2CM-104 | 2CM-102 | Units |
|---|---|---|---|---|---|---|---|
| **Optical** | | | | | | | |
| Center Wavelength | $\lambda_c$ | 1470 | 1490 | 1490 | 1560 | 1570 | nm (±20) |
| Output power (CW) | $P_o$ | 8.0 | 6.5 | 8.0 | 5.8 | 7.7 | watts |
| Spectral Width | $\Delta\lambda$ | 10 | 10 | 10 | 30 | 10 | nm 3dB |
| Slope Efficiency | $\eta_o$ | 0.46 | 0.45 | 0.46 | 0.35 | 0.45 | W/A |
| Temperature Coefficient | $\Delta\lambda/\Delta\lambda T$ | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | nm/C |
| Optical Fiber Core Dia. | | 200 | 105 | 200 | 105 | 200 | µm |
| Optical Fiber Clad | | 220 | 125 | 220 | 125 | 220 | µm |
| Optical Fiber NA | | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | |
| Fiber Length | | | | 1.0 | | | m |
| Connector | | | | SMA 905 | | | |
| **Electrical** | | | | | | | |
| Power conversion Eff. | $\eta$ | 20 | 18 | 20 | 15 | 19 | % |
| Threshold Current | $I_{th}$ | 1.0 | 0.5 | 1.0 | 0.5 | 1.0 | A |
| Operating Current | $I_{op}$ | 13.5 | 12.0 | 13.5 | 12.0 | 12.0 | A |
| Operating Voltage | $V_{op}$ | 2.9 | 3.1 | 2.9 | 3.1 | 3.0 | V |
| Series Resistance | $R_s$ | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | ohm |
| **Aiming Beam** | | | | | | | |
| Output Power | $P_a$ | | | <2 | | | mW |
| Wavelength | $\lambda_a$ | | | 635 +/- 10 | | | nm |
| Operating Voltage | $V_{op}$ | | | 5 | | | V |
| Current Limit | $I_{max}$ | | | 50 | | | mA |
| **Thermistor** | | | | | | | |
| Nominal resistance | @25C | | | 10 | | | kOhms |
| Material Constant | | | | 3477 +/- 3% @ -25C / +75C | | | |
| **Mechanical** | | | | | | | |
| Weight | | | | 170 | | | g |
| Operating Temp. | | | | 10 to 40 | | | °C |
| Storage Temp. | | | | -20 to 80 | | | °C |
| Lead Soldering Temp. | | | | 250 | | | °C |

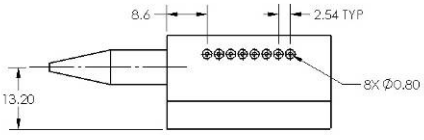
Specified values are rated at a constant heat sink temperature of 20°C




PIN OUT: (FOR REFERENCE ONLY, REFER TO DOCUMENTATION SUBMITTED WITH PRODUCT FOR ACTUAL PIN OUT)

1. LD CATHODE ( - )
2. LD ANODE ( + )
3. NONE
4. NONE
5. AIMING BEAM LD ( + )
6. AIMING BEAM LD ( - )
7. PD ( - )
8. PD ( + )
9. THERMISTOR
10. THERMISTOR







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