# High Power Laser Diode Bar

## Part Number: BAR-146

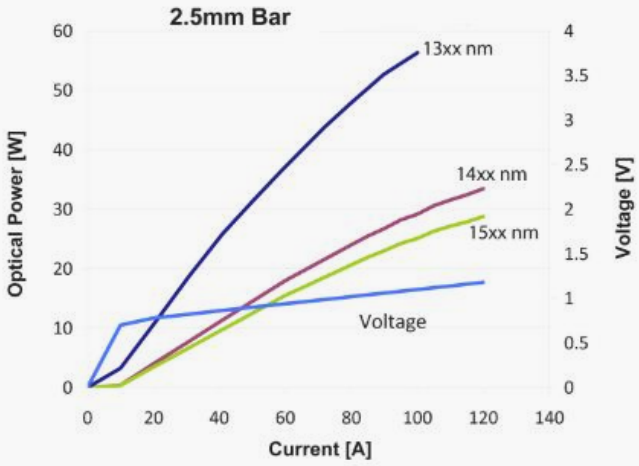
High Power 19 Emitters Bar
Multi-Mode Fabry-Perot
CW Wavelength at 1350nm

## Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard 19 Emitters Bar
- Cost Effective

## Application

- Professional Medical
- Home Medical
- Telecom OTDR
- Telecom Optical Comm




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

BAR-146

| Optical | Symbol | Typ. | Units |
|---|---|---|---|
| Center Wavelength | $\lambda_c$ | 1350 | nm (±20) |
| Output Power (CW)* | $P_{out}$ | 28 | watts (±10%) |
| Chip Cavity Length | CL | 2500 | µm |
| Emitter Width | W | 95 | µm |
| Number of Emitters | | 19 | |
| Spectral Width FWHM | $\Delta\lambda$ | 15 | nm |
| Slope Efficiency | $\eta$ | 0.33 | W/A |
| Fast Axis Div. | $\Theta_{\perp}$ | 25 | deg FWHM |
| Slow Axis Div. | $\Theta_{\parallel}$ | 8 | deg FWHM |
| **Electrical** | **Symbol** | | **Units** |
| Power Conversion Eff. | $\eta$ | 30 | % |
| Threshold Current | $I_{TH}$ | 9 | A |
| Operating Current | $I_{op}$ | 100 | A |
| Operating Voltage | $V_{op}$ | 1 | V |
| **Mechanical** | | **Range** | **Units** |
| Operating Temp.** | | -40 to 60 | °C |
| Storage Temp. | | -40 to 80 | °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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## Mechanical Drawing

### BAR ATTRIBUTES

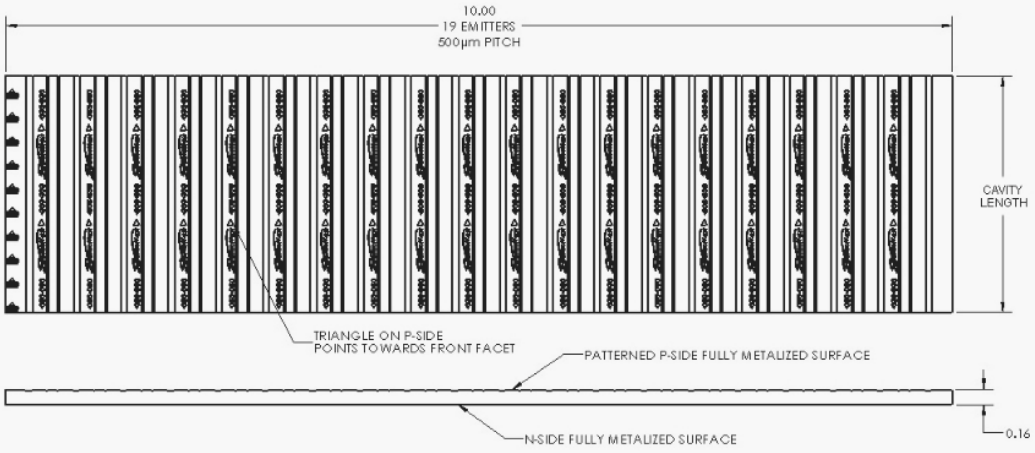
| | |
|---|---|
| APERTURE WIDTH (µm) | Multi Mode (95) ± 3 |
| BAR WIDTH (mm) | 10 ± 0.01 |
| THICKNESS (µm) | 160 ± 10 |
| CAVITY LENGTH (µm) | Varies ± 10 |

### P METALIZATION

| MATERIAL | THICKNESS (nm) | TOLERANCE (nm) |
|---|---|---|
| Ti | 50 | ± 10 |
| Pt | 125 | ± 25 |
| Au | 250 | ± 50 |

### N METALIZATION

| MATERIAL | THICKNESS (nm) | TOLERANCE (nm) |
|---|---|---|
| Ti | 30 | ± 10 |
| Pt | 125 | ± 25 |
| Au | 400 | ± 40 |







SemiNex Corporation • 153 Andover Street, Suite 201, Danvers, MA 01923 • 978-326-7700 • sales@seminex.com