

## High Power Laser Diode B-mount



### Part Number: B-106

High Power B-mount  
Multi-Mode Fabry-Perot  
CW Wavelength at 1470nm  
Lensed Options Available



### Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard B-mount
- Cost Effective

### Application

- Professional Medical



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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## High Power Laser Diode B-mount



### Specification

B-106



| Optical               | Symbol               | Typ.      | Units                |
|-----------------------|----------------------|-----------|----------------------|
| Center Wavelength     | $\lambda_c$          | 1470      | nm ( $\pm 20$ )      |
| Output Power (CW)*    | $P_{out}$            | 5         | watts ( $\pm 10\%$ ) |
| Emitter Width         | W                    | 95        | $\mu m$              |
| Spectral Width FWHM   | $\Delta\lambda$      | 15        | nm 3dB               |
| Slope Efficiency      | $\eta$               | 0.4       | W/A                  |
| Fast Axis Div.        | $\Theta_{\perp}$     | 28        | deg FWHM             |
| Slow Axis Div.        | $\Theta_{\parallel}$ | 9         | deg FWHM             |
| Electrical            | Symbol               |           | Units                |
| Power Conversion Eff. | $\eta$               | 21        | %                    |
| Threshold Current     | $I_{TH}$             | 0.5       | A                    |
| Operating Current     | $I_{op}$             | 14        | A                    |
| Operating Voltage     | $V_{op}$             | 1.8       | V                    |
| Mechanical            | Symbol               | Range     | Units                |
| Operating Temp.**     |                      | -40 to 60 | $^{\circ}C$          |
| Storage Temp.         |                      | -40 to 80 | $^{\circ}C$          |

\*Specified values are rated at a constant heat sink temperature of 20 $^{\circ}C$ .

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

\*Available Lenses

| Suffix | Description                                         |
|--------|-----------------------------------------------------|
| -108   | Lens Matched f=171 $\mu m$ , 5mm Lg                 |
| -118   | Lens Collimated <10mrad f=274 $\mu m$ , 5mm Lg      |
| -134   | Lens Matched f=274 $\mu m$ , 5mm Lg                 |
| -141   | Lens, FAC, f=590 $\mu m$ , 5mm Lg, Collimated 5mrad |

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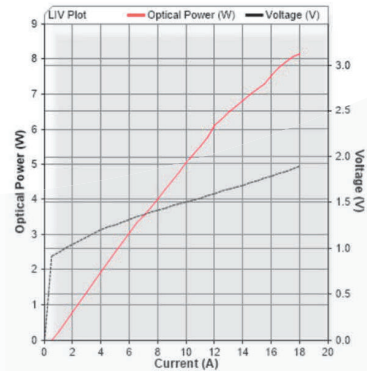
## High Power Laser Diode B-mount



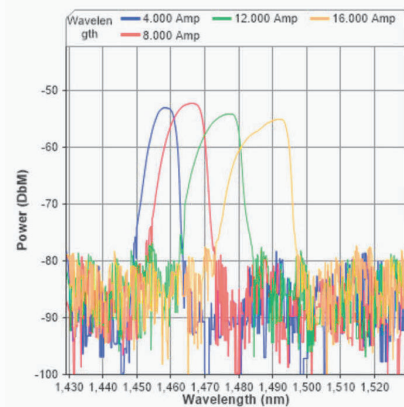
### SemiNex Laser Diodes B-106

#### Graphs & Data

#### Typical B-mount L-I-V Characteristics



#### Typical B-mount Output Spectrum

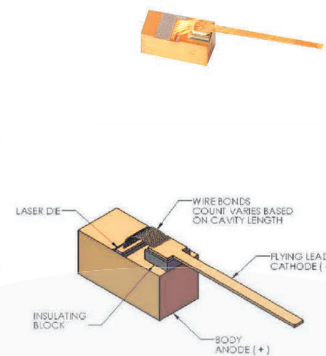
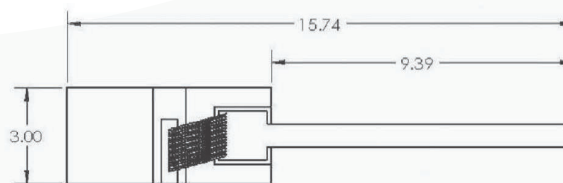
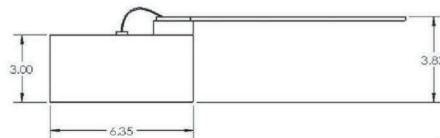


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## High Power Laser Diode B-mount



### Mechanical Drawing



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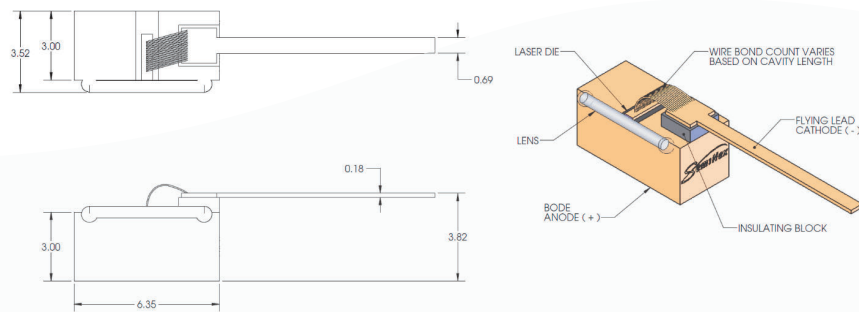
### Mechanical Drawing

B-106-108

B-106-118

B-106-134

B-106-141



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