

High Power Laser Diode B-mount



Part Number: B-123

High Power B-mount
Multi-Mode Fabry-Perot
CW Wavelength at 1375nm
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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Specification

B-123



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1375	nm (± 20)
Output Power (CW)*	P_{out}	5.6	watts ($\pm 10\%$)
Emitter Width	W	95	μm
Spectral Width FWHM	$\Delta\lambda$	15	nm
Slope Efficiency	η	0.4	W/A
Fast Axis Div.	θ_{\perp}	28	deg FWHM
Slow Axis Div.	θ_{\parallel}	9	deg FWHM
Electrical	Symbol		Units
Power Conversion Eff.	η	22	%
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	$^{\circ}\text{C}$
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.

*Available Lenses

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

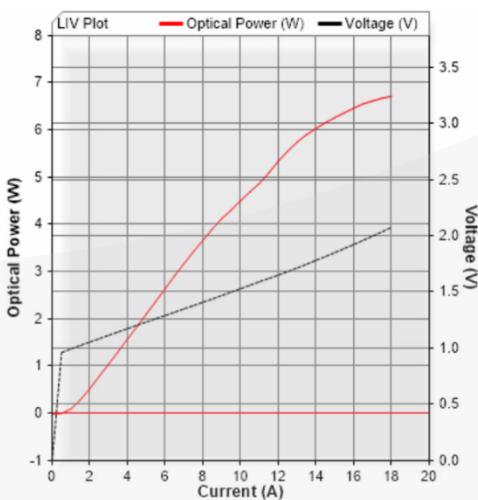
High Power Laser Diode B-mount



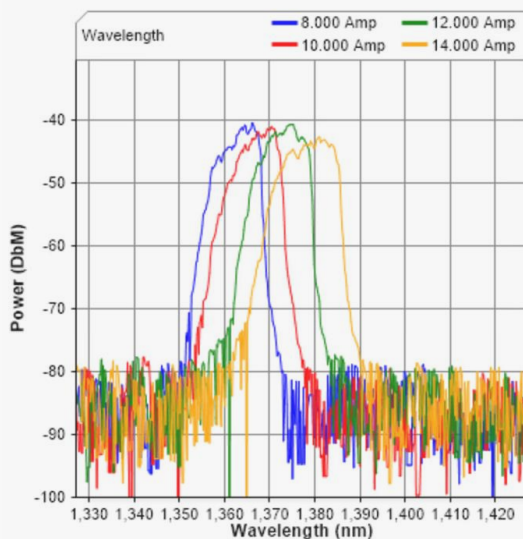
SemiNex Laser Diodes B-123

Graphs & Data

Typical B-mount L-I-V Characteristics



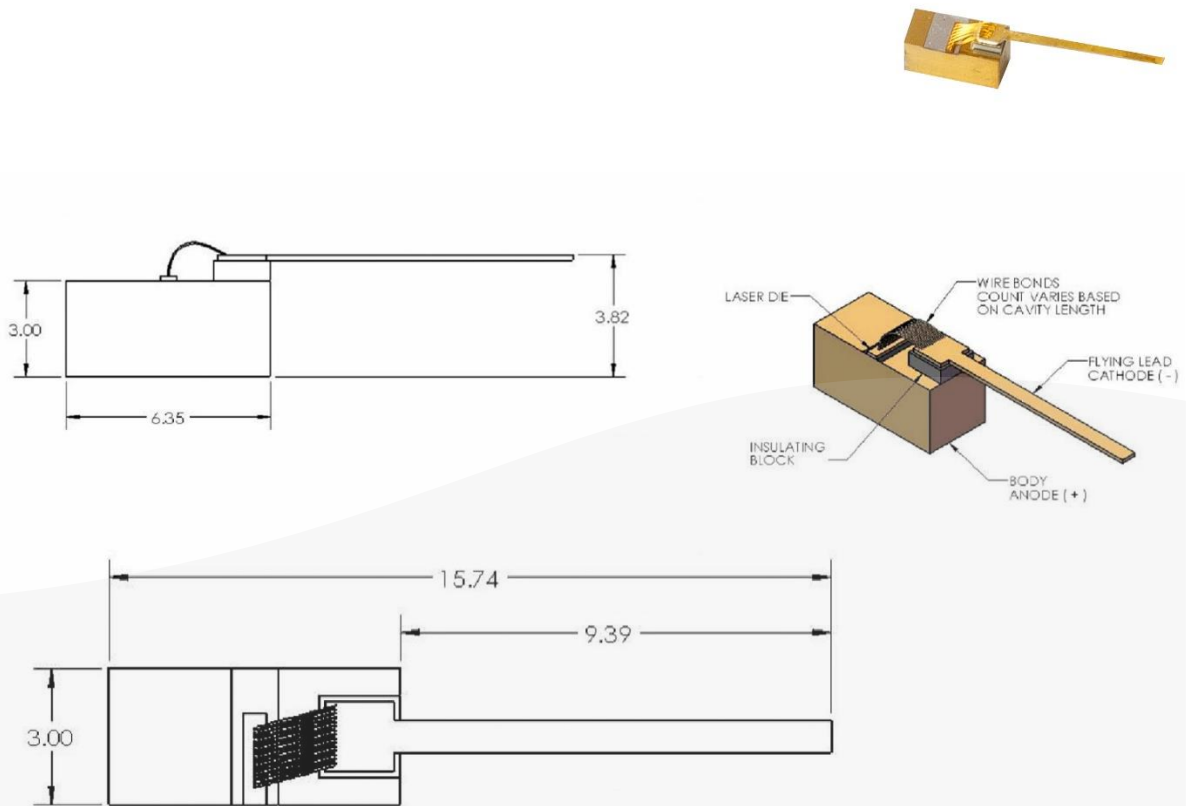
Typical B-mount Output Spectrum



High Power Laser Diode B-mount



Mechanical Drawing



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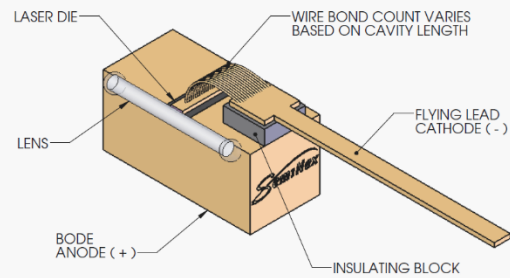
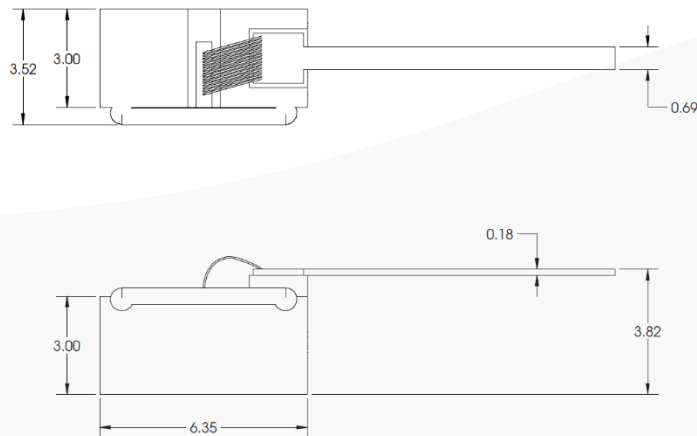
Mechanical Drawing

B-123-108

B-123-118

B-123-134

B-123-141



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