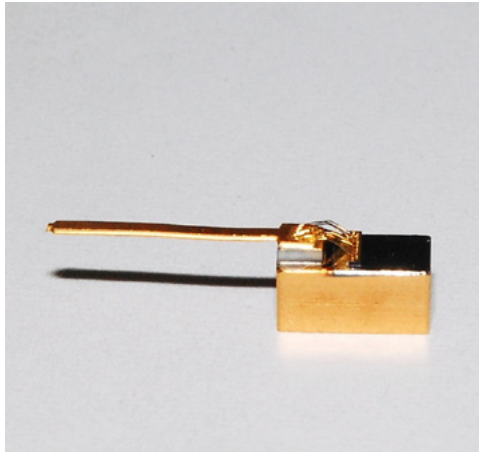




B-Mount

High Power Multi-Mode and Single Mode Lasers
6.2 Watts of CW power
1310, 1450, 1470, 1532, 1550 and 1625 nm
Custom Wavelengths Available
Lensed Options Available

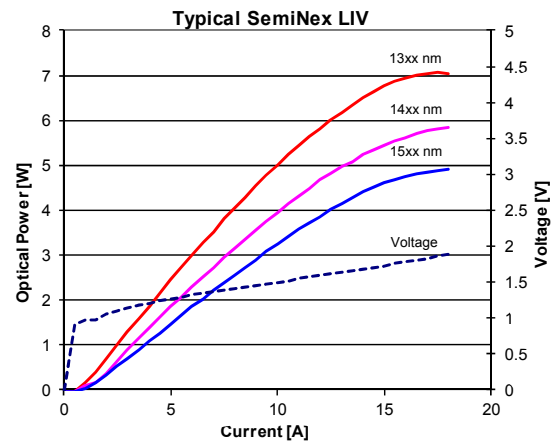
Features

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

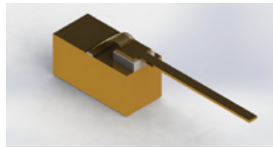
Applications

- Medical laser equipment
- LIDAR
- Free Space Optical Communication
- 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



701-910-001 Rev. 5

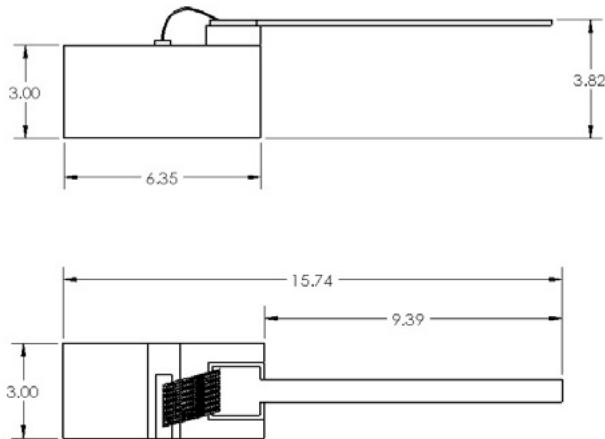


B – Mount

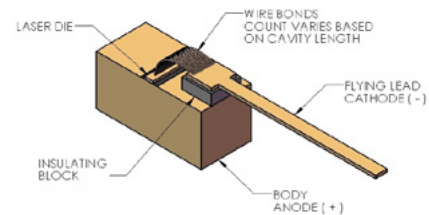
	Symbol	B-103	B-123	B-130	B-104	B-106	B-109	B-118	B-133	B-134	Units
Optical											
Wavelength	λ_c	1310	1350	1380	1450	1480	1532	1550	1625	1650	nm (± 20)
Output power (CW)	P_o	6.2	6.2	6.2	5.0	5.0	4.2	4.2	3.5	3.0	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	95	95	95	95	μm
Emitter Height	H	1	1	1	1	1	1	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	15	15	10	15	15	15	nm 3dB
Slope Efficiency	η_o	0.5	0.5	0.5	0.4	0.4	0.35	0.35	0.3	0.22	W/A
Fast Axis Div.*	θ_{perp}	28	28	28	28	28	28	28	28	28	deg FWHM
Slow Axis Div.	θ_{parallel}	9	9	9	9	9	9	9	9	9	deg FWHM
Electrical											
Power conversion Eff.	η	0.27	0.27	0.27	0.21	0.21	0.18	0.18	0.15	0.13	
Threshold Current	I_{th}	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	A
Operating Current	I_{op}	13	13	13	14	14	14	14	14	14	A
Operating Voltage	V_{op}	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	V
Series Resistance	R_s	0.05	0.05	0.5	0.05	0.05	0.05	0.05	0.05	0.05	ohm
Mechanical											
Weight		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	g
Operating Temp.		10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	$^{\circ}\text{C}$
Storage Temp.		-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	$^{\circ}\text{C}$

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

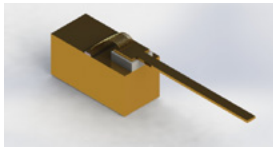
*Fast Axis Divergence can be changed with lens option.



SemiNex also offers lensed versions of B-Mount lasers. Most often the fast axis is reduced to match the slow axis divergence of 9 degrees. However multiple custom options are also available. Contact SemiNex sales for further details.



701-910-001 Rev. 5

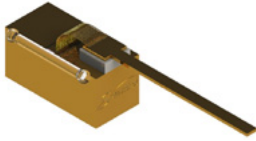


B – Mount Single Mode

	Symbol	B-125	B-115	B-124	Units
Optical					
Wavelength	λ_c	1310	1550	1650	nm (± 20)
Output power (CW)	P_o	800	600	450	mW
Emitter Width	W	5	4	4	μm
Emitter Height	H	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	nm 3dB
Slope Efficiency	η_o	0.5	0.3	0.3	W/A
Fast Axis Div.	θ_{perp}	30	30	30	deg FWHM
Slow Axis Div.	θ_{parallel}	13	13	13	deg FWHM
Electrical					
Power conversion Eff.	η	17	11	9	%
Threshold Current	I_{th}	50	50	50	mA
Operating Current	I_{op}	1.7	1.8	1.6	A
Operating Voltage	V_{op}	2.7	3.1	3.0	V
Series Resistance	R_s	1.0	1.2	1.4	ohm
Mechanical					
Weight		0.5	0.5	0.5	g
Operating Temp.		10 to 30	10 to 30	10 to 30	$^{\circ}\text{C}$
Storage Temp.		-20 to 80	-20 to 80	-20 to 80	$^{\circ}\text{C}$

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

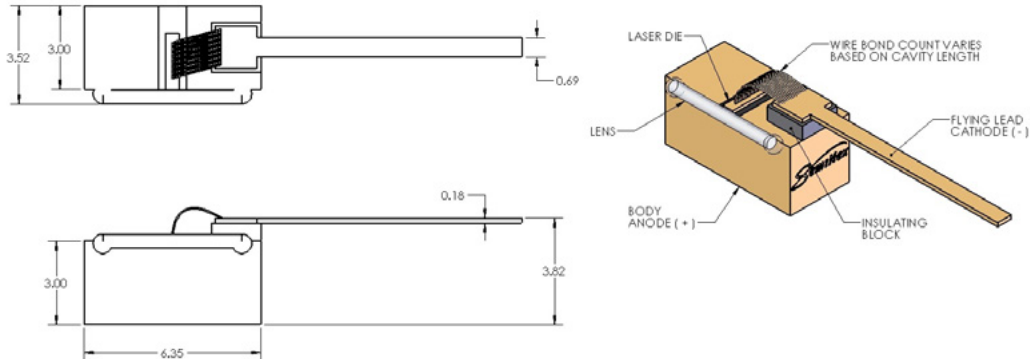
701-910-001 Rev. 5



B – Mount with lens

	Symbol	B-103-108	B-123-108	B-130-108	B-104-108	B-106-108	B-109-108	B-118-108	B-133-108	B-134-108	Units
Optical											
Wavelength	λ_c	1310	1350	1380	1450	1480	1532	1550	1625	1650	nm (± 20)
Output power (CW)	P_o	5.9	5.9	5.9	4.8	4.8	4.0	4.0	3.3	3.0	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	95	95	95	95	μm
Emitter Height	H	1	1	1	1	1	1	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	15	15	10	15	15	15	nm 3dB
Slope Efficiency	η_o	0.5	0.5	0.5	0.4	0.4	0.35	0.35	0.3	0.22	W/A
Fast Axis Div.*	θ_{perp}	9	9	9	9	9	9	9	9	9	deg FWHM
Slow Axis Div.	θ_{parallel}	9	9	9	9	9	9	9	9	9	deg FWHM
Electrical											
Power conversion Eff.	η	0.27	0.27	0.27	0.21	0.21	0.18	0.18	0.15	0.13	
Threshold Current	I_{th}	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	A
Operating Current	I_{op}	13	13	13	14	14	14	14	14	14	A
Operating Voltage	V_{op}	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	V
Series Resistance	R_s	0.05	0.05	0.5	0.05	0.05	0.05	0.05	0.05	0.05	ohm
Mechanical											
Weight		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	g
Operating Temp.		10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	°C
Storage Temp.		-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	-20 to 80	°C

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



All statements, technical information and recommendations related to the product herein are based upon information believed to be reliable or accurate. The accuracy or completeness herein is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. SemiNex Corporation reserves the right to change at any time without notice the design, specification, deduction, fit or form of its described herein, including withdrawal at any time of a product offered for sale herein. Users are encouraged to visit www.seminex.com for the latest data. SemiNex Corporation makes no representations that the products herein are free from any intellectual property claims of others. Please contact SemiNex for more information. © 2014 SemiNex Corporation



701-910-001 Rev. 5