

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

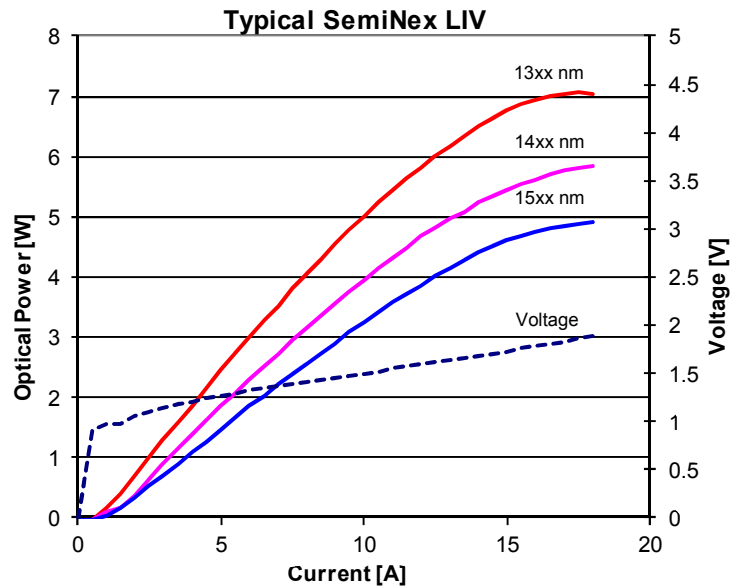
Features

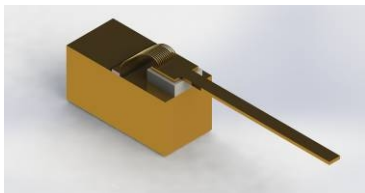
- High output power
- High dynamic power range
- High efficiency
- Standard Low Cost Package

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





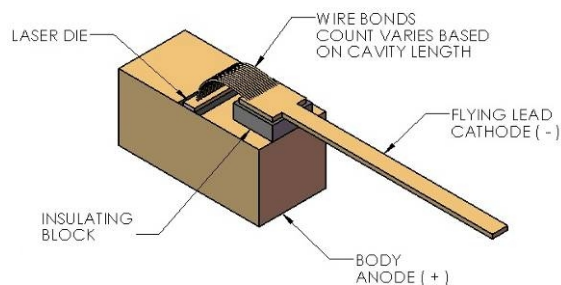
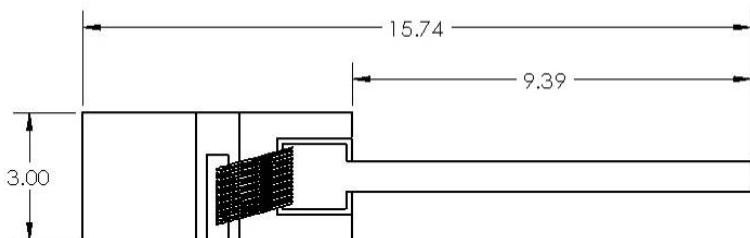
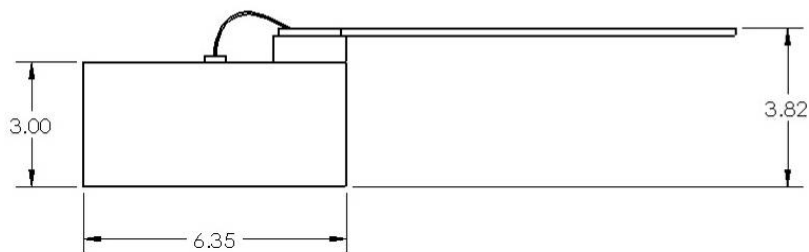
B – Mount

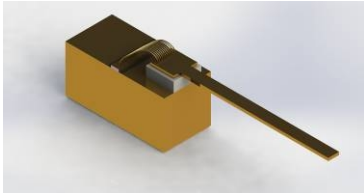


	Symbol	B-103	B-123	B-104	B-106	B-109	B-118	B-133	B-134	Units
Optical										
Wavelength	λ_c	1310	1380	1450	1480	1532	1550	1625	1650	nm (± 20)
Output power (CW)	P_o	6.2	5.7	5.0	5.0	4.2	4.2	3.5	3.2	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	95	95	95	μm
Emitter Height	H	1	1	1	1	1	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	15	10	15	15	15	nm 3dB
Slope Efficiency	η_o	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	deg FWHM
Slow Axis Div.	θ_{parallel}	9	9	9	9	9	9	9	9	deg FWHM
Electrical										
Power conversion Eff.	η	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	A
Operating Current	I_{op}	13	13	14	14	14	14	14	14	A
Operating Voltage	V_{op}	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	V
Series Resistance	R_s	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	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	$^{\circ}\text{C}$
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	$^{\circ}\text{C}$

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

*Fast Axis Divergence can be changed with lens option.



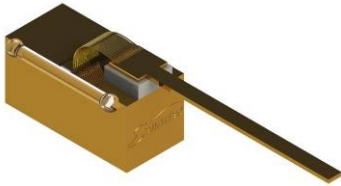


B – Mount Single Mode



	Symbol	B-125	B-115	B-124	Units
Optical					
Wavelength	λ_c	1320	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



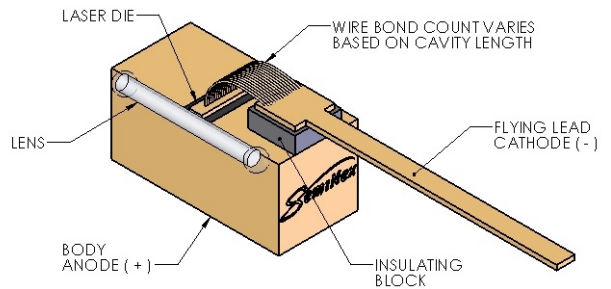
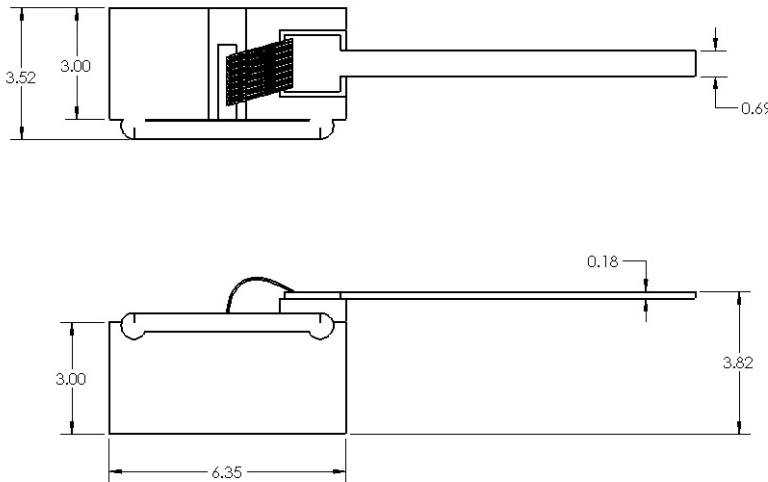
B – Mount with lens



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	1540	1565	1625	1650	nm (± 20)
Output power (CW)	P_o	5.9	5.9	5.6	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	$^{\circ}\text{C}$
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°C



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