



B-Mount

High Power Multi-Mode and Single Mode Lasers
 CW power

Wavelengths Available

Options Available

Applications

Medical
 Pump source

Aerospace

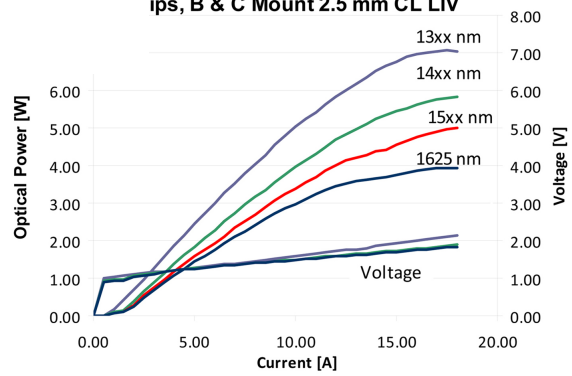
High Power
 Dynamic Range
 Efficiency

Low Cost Package

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.



Typical Results for B & C Mount 2.5 mm CL LIV

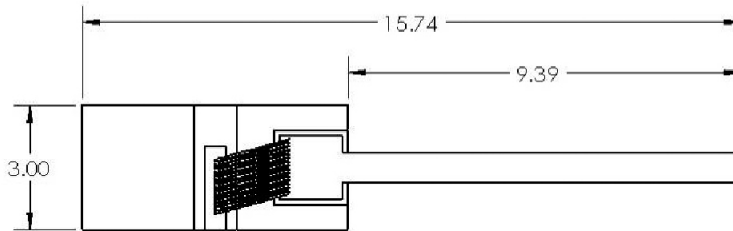
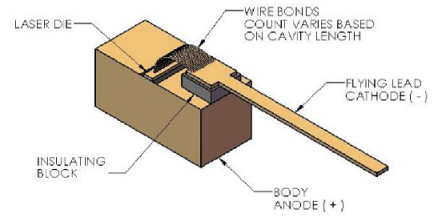
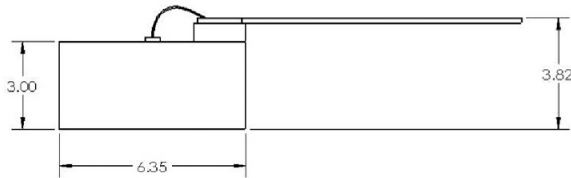




B-Mount

	Symbol	B-103	B-123	B-104	B-106	B-109	B-118	B-134	Units
Optical									
Wavelength	λ_c	1325	1380	1460	1470	1540	1565	1650	nm (± 20)
Output Power (CW)	P _r	5.7	5.6	5.0	5.0	4.2	4.2	3.2	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	95	95	μm
Emitter Height	H	1	1	1	1	1	1	1	μm
Spectral Width	$\delta\lambda$	15	15	15	15	15	15	15	nm 3dB
Slope Efficiency	η	0.50	0.45	0.40	0.40	0.35	0.35	0.30	W/A
Fast Axis Div.*	Θ_{perp}	28	28	28	28	28	28	28	deg FWHM
Slow Axis Div.	Θ_{parallel}	9	9	9	9	9	9	9	deg FWHM
Electrical									
Power Conversion Eff.	η	0.22	0.23	0.21	0.21	0.18	0.18	0.13	%
Threshold Current	I _{th}	0.5	0.5	0.5	0.5	0.5	0.5	0.5	A
Operating Current	I _{op}	14	14	14	14	14	14	12	A
Operating Voltage	V _{op}	1.8	1.8	1.7	1.8	1.7	1.7	1.7	V
Series Resistance	R _s	0.05	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	g
Operating Temp.		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	°C

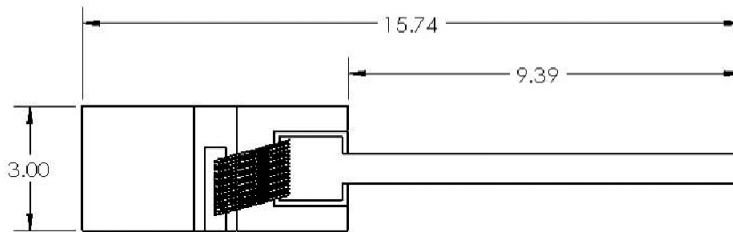
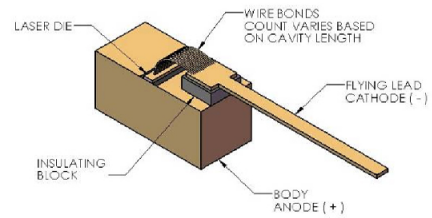
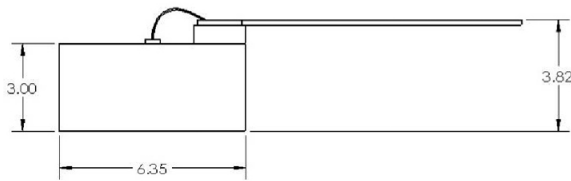
Specified values are rated at a constant heat sink temperature of 20°C
*Fast Axis Divergence can be changed with lens option.



B-Mount Single Mode

	Symbol	B-125	B-115	B-146	B-124	Units
Optical						
Wavelength	λ_c	1320	1555	1625	1660	nm (± 20)
Output Power (CW)	P _r	0.8	0.6	0.5	0.5	watts
Chip Cavity Length	CL	2500	2500	2500	2500	μm
Emitter Width	W	5	4	4	5	μm
Emitter Height	H	1	1	1	1	μm
Spectral Width	$\delta\lambda$	15	15	15	15	nm 3dB
Slope Efficiency	η	0.50	0.30	0.30	0.25	W/A
Fast Axis Div.*	Θ_{perp}	30	30	30	30	deg FWHM
Slow Axis Div.	Θ_{parallel}	12	10	10	10	deg FWHM
Electrical						
Power Conversion Eff.	η	0.17	11	11	14	%
Threshold Current	I _{th}	0.05	0.5	0.05	0.05	A
Operating Current	I _{op}	1.7	1.8	1.8	1.4	A
Operating Voltage	V _{op}	2.7	3.2	3.1	2.2	V
Series Resistance	R _s	1	1.2	1.2	1	ohm
Mechanical						
Weight		0.5	0.5	0.5	0.5	g
Operating Temp.		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	$^{\circ}\text{C}$

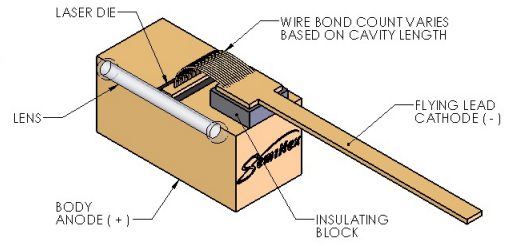
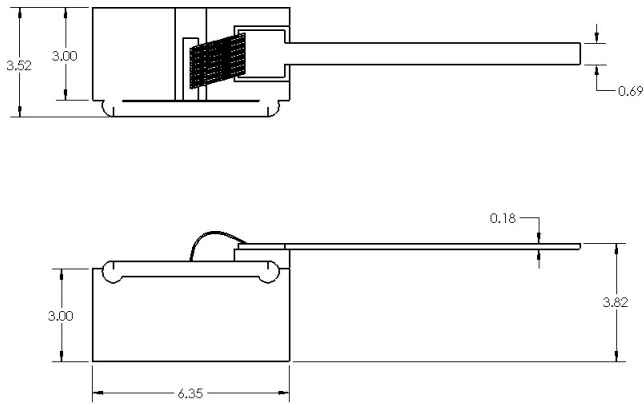
Specified values are rated at a constant heat sink temperature of 20°C.



B-Mount With Lens

	Symbol	B-103-118	B-103-134	B-123-118	B-123-134	B-104-118	B-104-134	B-106-134	B-106-118	B-109-118	B-109-134	B-118-134	B-118-118	B-134-118	B-134-134	Units
Optical																
Wavelength	λ_c	1325	1325	1380	1380	1460	1460	1480	1480	1540	1540	1565	1565	1650	1650	nm (± 20)
Output Power (CW)	P_r	5.5	5.5	5.4	5.4	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	3.0	3.0	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	95	95	95	95	95	95	95	95	95	μm
Emitter Height	H	1	1	1	1	1	1	1	1	1	1	1	1	1	1	μm
Spectral Width	$\delta\lambda$	15	15	15	15	15	15	15	15	15	15	15	15	15	15	nm 3dB
Slope Efficiency	η_l	0.50	0.50	0.45	0.45	0.40	0.40	0.40	0.40	0.35	0.35	0.35	0.35	0.30	0.30	W/A
Fast Axis Div.*	Θ_{perp}	0.6	9	0.6	9	0.6	9	9	0.6	9	9	9	0.6	0.6	9	deg FWHM
Slow Axis Div.	Θ_{parallel}	9	9	9	9	9	9	9	9	9	9	9	9	9	9	deg FWHM
Electrical																
Power Conversion Eff.	η	0.22	0.22	0.23	0.23	0.21	0.21	0.21	0.21	0.18	0.18	0.18	0.18	0.13	0.13	%
Threshold Current	I_{th}	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	A
Operating Current	I_{op}	14	14	14	14	14	14	14	14	14	14	14	14	12	12	A
Operating Voltage	V_{op}	1.8	1.8	1.8	1.8	1.7	1.7	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	0.05	0.05	0.05	0.05	0.05	0.05	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	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	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	-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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Date Created: Mar 8 2017 6:51PM UTC

