

C-Mount

High Power Multi-Mode SemiNex Lasers
Up to 6.2 watts CW Power
1310, 1380, 1450, 1470, 1532, and 1550 nm
Custom Wavelengths Available
Lensed Options Available

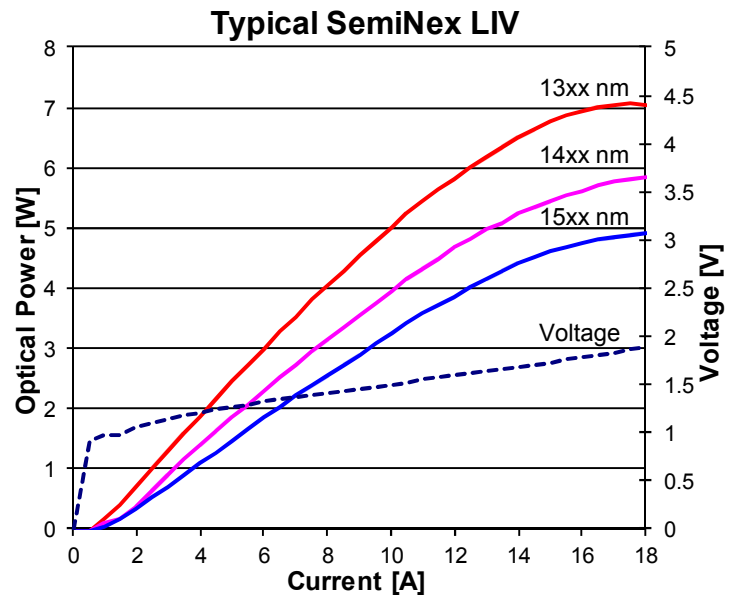
Features

- 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





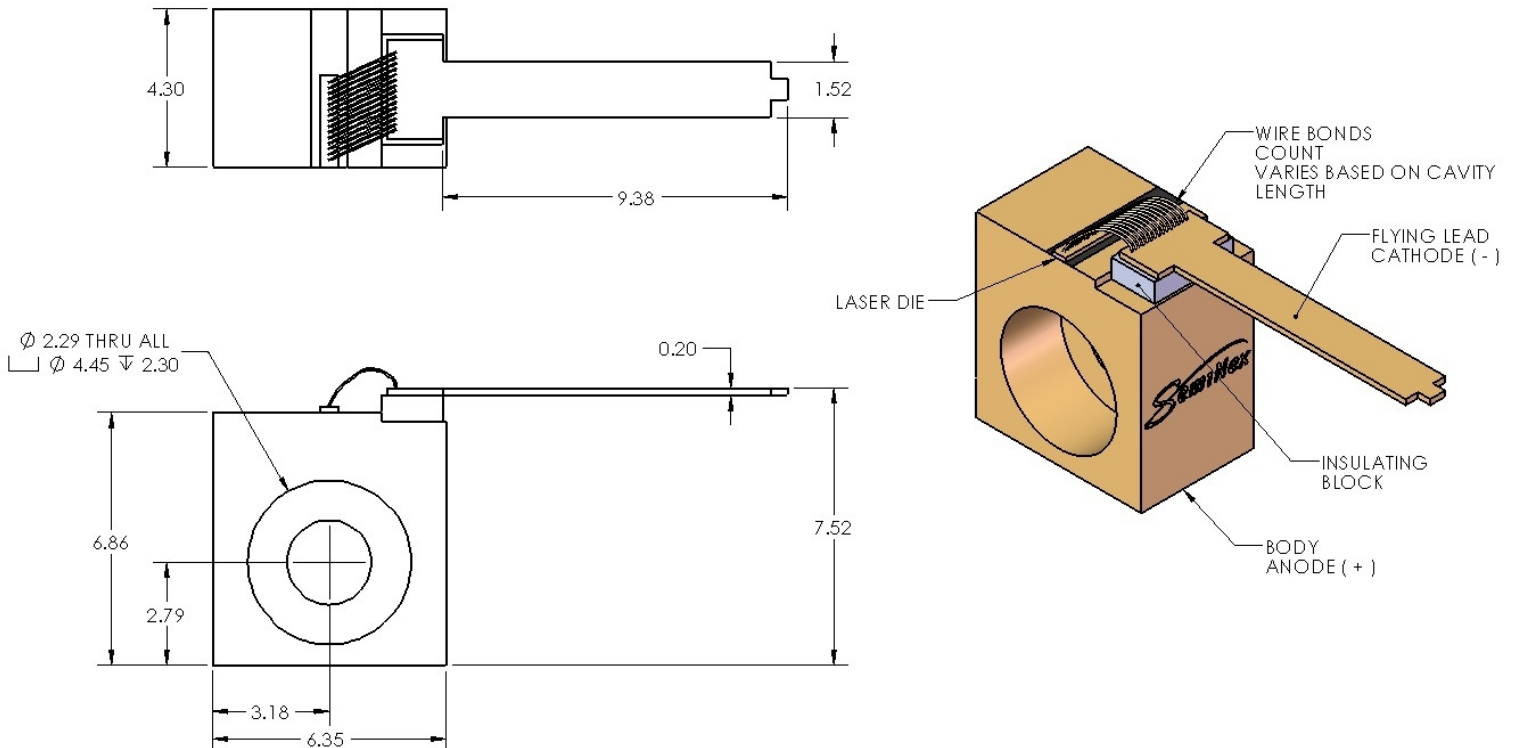
C-Mount



	Symbol	C-130	C-124	C-128	C-106	C-102	C-105	C-126	C-109	C-116	C-119	C-133	Units
Optical													
Wavelength	λ_c	1310	1380	1450	1470	1475	1490	1510	1540	1565	1575	1595	nm (± 20)
Output power (CW)	P_o	6.1	5.7	5.0	5.0	3.7	7.0	4.2	4.2	4.2	3.2	3.0	watts
Chip Cavity Length	CL	2500	2500	2500	2500	1500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	95	95	180	95	95	95	50	50	μm
Emitter Height	H	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	nm 3dB
Slope Efficiency	η_o	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.35	0.35	0.4	0.3	W/A
Fast Axis Div.	θ_{perp}	28	28	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	9	9	deg FWHM
Electrical													
Power conversion Eff.	η	0.27	0.27	0.21	0.21	0.3	0.21	0.21	0.18	0.18	0.17	0.16	%
Threshold Current	I_{th}	0.45	0.45	0.45	0.45	0.45	1	0.45	0.45	0.45	0.45	0.45	A
Operating Current	I_{op}	13	13	14	14	8	21	14	14	14	9.5	9.5	A
Operating Voltage	V_{op}	1.8	1.8	1.7	1.7	1.5	1.6	1.7	1.7	1.7	1.96	2	V
Series Resistance	R_s	0.05	0.05	0.05	0.05	0.08	0.03	0.05	0.05	0.05	0.15	0.15	ohm
Mechanical													
Weight		1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	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	$^{\circ}\text{C}$
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	$^{\circ}\text{C}$

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

*Fast Axis Divergence can be changed with lens option.



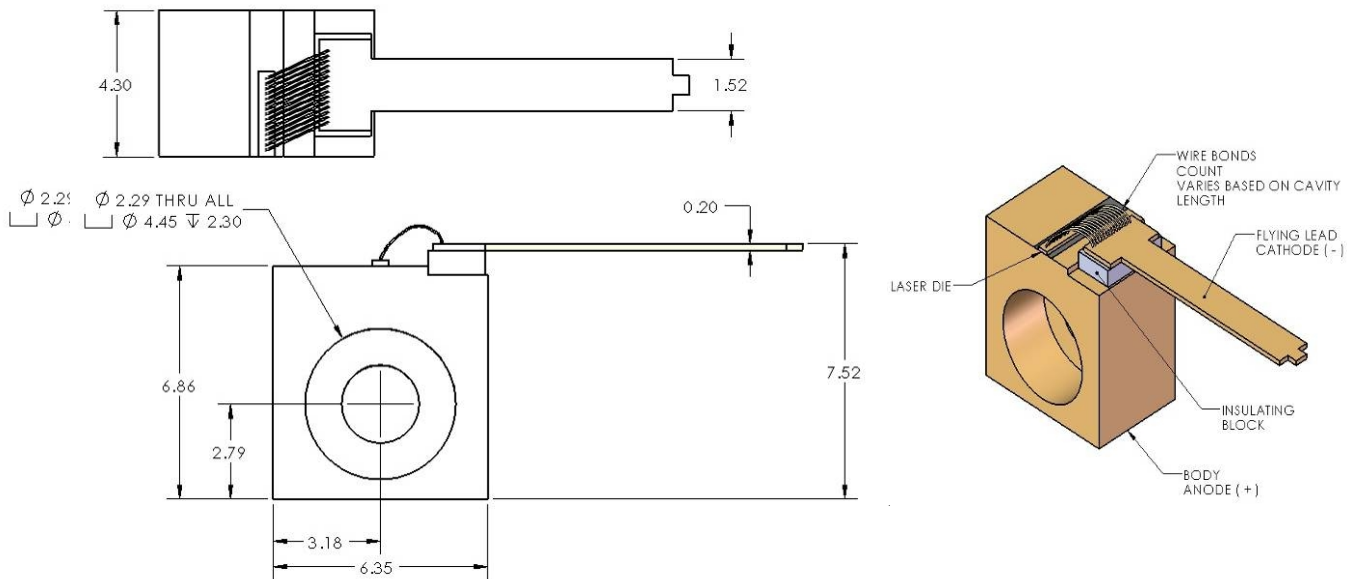


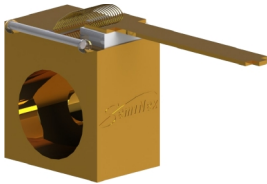
C-Mount Single Mode



	Symbol	C-125	C-121	C-123	C-131	Units
Optical						
Wavelength	λ_c	1310	1550	1625	1650	nm (± 20)
Output power (CW)	P_o	800	600	450	450	mW
Emitter Width	W	5	4	4	4	μm
Emitter Height	H	1	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	15	nm 3dB
Slope Efficiency	η_o	0.5	0.3	0.3	0.3	W/A
Fast Axis Diverg.	θ_{perp}	30	30	30	30	deg FWHM
Slow Axis Diverg.	θ_{parallel}	13	13	13	13	deg FWHM
Electrical						
Power conversion Eff.	η	17	11	11	9	%
Threshold Current	I_{th}	50	50	50	50	mA
Operating Current	I_{op}	1.7	1.8	1.8	1.6	A
Operating Voltage	V_{op}	2.7	3.1	3.1	3.0	V
Series Resistance	R_s	1.0	1.2	1.2	1.4	ohm
Mechanical						
Weight		1.4	1.4	1.4	1.4	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



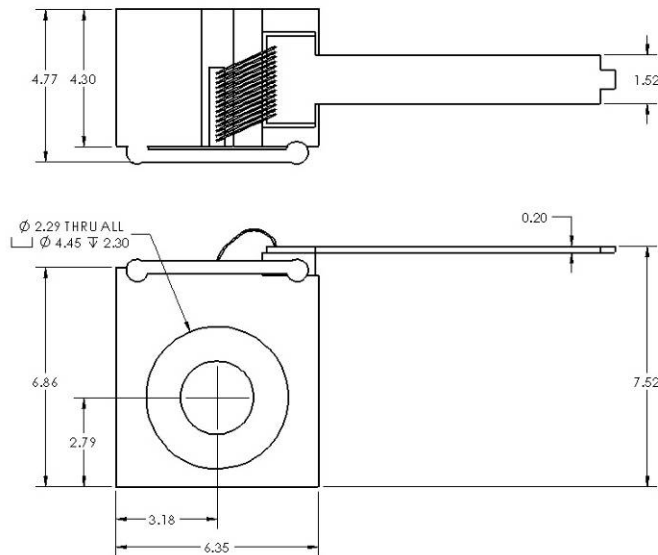


C-Mount with Lens

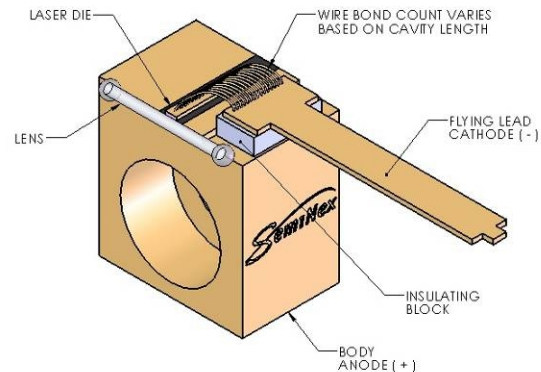


	Symbol	C-130-108	C-124-108	C-128-108	C-106-108	C-126-108	C-109-108	C-116-108	Units
Optical									
Wavelength	λ_c	1310	1380	1450	1470	1510	1540	1565	nm (± 20)
Output power (CW)	P_o	5.9	5.6	4.8	4.8	4.0	4.0	4.0	watts
Chip Cavity Length	CL	2500	2500	2500	2500	2500	2500	2500	μm
Emitter Width	W	95	95	95	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_o	0.5	0.5	0.4	0.4	0.4	0.35	0.35	W/A
Fast Axis Div.	θ_{perp}	9	9	9	9	9	9	9	deg FWHM
Slow Axis Div.	θ_{parallel}	9	9	9	9	9	9	9	deg FWHM
Electrical									
Power conversion Eff.	η	0.27	0.27	0.21	0.21	0.21	0.18	0.18	%
Threshold Current	I_{th}	0.45	0.45	0.45	0.45	0.45	0.45	0.45	A
Operating Current	I_{op}	13	13	14	14	14	14	14	A
Operating Voltage	V_{op}	1.8	1.8	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	ohm
Mechanical									
Weight		1.4	1.4	1.4	1.4	1.4	1.4	1.4	g
Operating Temp.		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	$^{\circ}\text{C}$

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



SemiNex offers other lensed versions per specific customer request. Contact SemiNex sales for further details.



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SemiNex Corporation • 100 Corporate Place • Peabody, MA 01960 • 978-326-7700 • Email: info@seminex.com • www.seminex.com