

Laser Chips

High Power Multi-Mode SemiNex lasers
 5.0 Watts of CW Power
 1310,1470,1532,and 1550 nm
 Custom Wavelengths Available

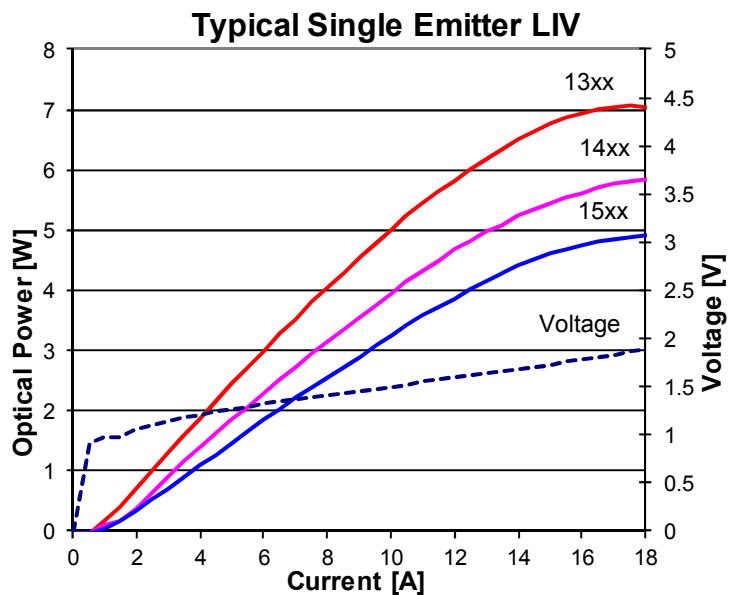
Features

- High Output Power
- High Dynamic Power Range
- High Efficiency

Applications

- Medical Lasers
- LIDAR
- Free Space Communications
- Targeting, Range finding
- Military / Aerospace

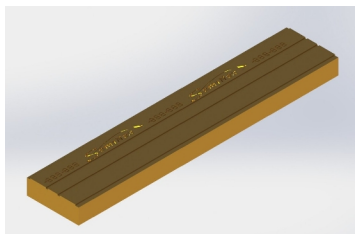
SemiNex delivers the highest available power at infrared wavelengths between 13xx and 17xx nm. When necessary we will further optimize the design of our InP laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements



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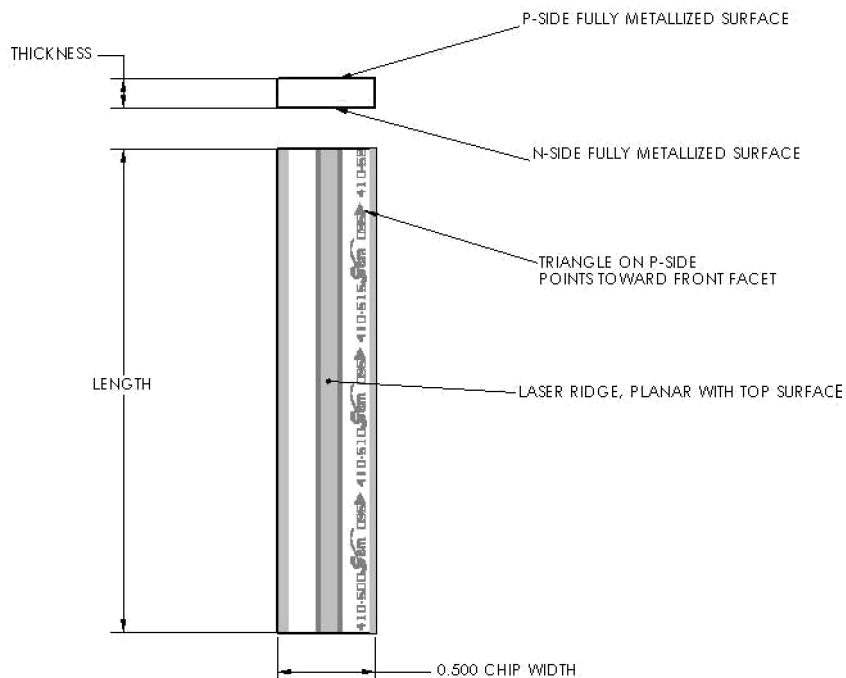


Laser Chips



		CHP-105	CHP-113	CHP-124	Units
Optical					
Center Wavelength	λ_c	1480	1540	1560	nm
Chip Cavity Length (typical)		2500	2500	2500	μm
Output power (CW)	P_o	5	4.2	4.2	watts
Emitter Width	W	95	95	95	μm
Emitter Height	H	1	1	1	μm
Spectral Width	$\Delta\lambda$	15	15	15	nm 3dB
Slope Efficiency	η_o	0.4	0.35	0.35	W/A
Fast Axis Divergence	θ_{perp}	28	28	28	deg FWHM
Slow Axis Divergence	θ_{parallel}	9	9	9	deg FWHM
Electrical					
Power conversion Efficiency	η	0.21	0.18	0.18	
Threshold Current	I_{th}	0.5	0.5	0.5	A
Operating Current	I_{op}	14	14	14	A
Operating Voltage	V_{op}	1.7	1.7	1.7	V
Series Resistance	R_s	0.05	0.05	0.05	ohm

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



CHIP ATTRIBUTES

APERTURE WIDTH	95 μm \pm 3 μm
CHIP WIDTH	500 μm \pm 10 μm
THICKNESS	160 μm \pm 10 μm
CAVITY LENGTH	1.50 or 2.50 \pm 10 μm

P METALLIZATION

MATERIAL	THICKNESS (nm)	TOLERANCE
Ti	50	+/- 10
Pt	125	+/- 25
Au	250	+/- 50

N METALLIZATION

MATERIAL	THICKNESS (nm)	TOLERANCE
Ti	30	+/- 10
Pt	125	+/- 25
Au	400	+/- 40

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