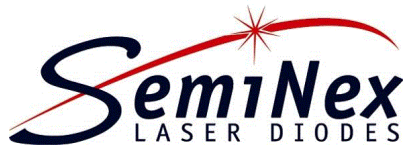


Preliminary Data Sheet



Semiconductor Optical Amplifier

High Gain SemiNex SOA
High Saturation Output Power
Curved or Tilted Waveguide and Array
13xx and 15xx nm
Custom Design and Waveguide available

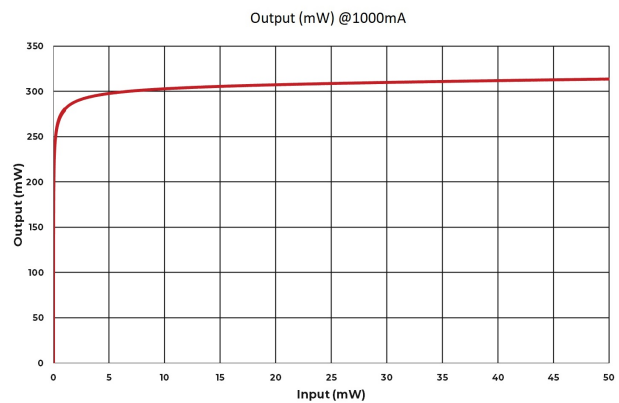
Applications

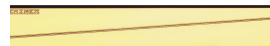
- FMCW LiDAR
- Telecom & Data Center
- Tunable Laser
- Spectroscopy
- Research

Features

- High Gain
- High Saturation Power
- High Efficiency
- Cost Effective

SemiNex delivers SOAs with the highest gain and available saturation power at infrared wavelengths. When necessary we will further optimize the design of our InP SOA to meet our customers' specific optical and electrical performance needs. Single waveguide or arrays are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or performance demands.

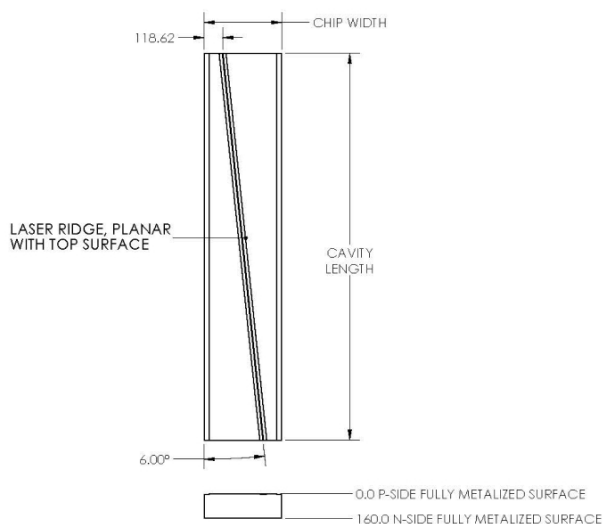




	Symbol	CHP-290	Units
Optical			
Wavelength	λ_c	1310	nm (± 20)
Output Power@1000mA	P_{out}	450	mW ($\pm 10\%$)
Aperture Width	AW	4	μm
Aperture Height	AH	1	μm
Spectral Width	$\delta\lambda$	85	nm @ 3dB
Gain @ $P_{in}=10\mu W$	G	30	dB
Beam Exit Angle	θ_{EXT}	19.5	degree
Noise Figure	NF	6	db
Polarization Extinction Ratio	PER	18	dB
Fast Axis Div.	θ_{perp}	30	deg FWHM
Slow Axis Div.	$\theta_{parallel}$	16	deg FWHM
Front Facet Reflectivity		<0.1%	
Rear Face Reflectivity		<0.1%	
Waveguide		Tilted Straight	
Electrical			
Operating Voltage	V_{op}	2	V
Operating Current	I_{op}	1	A
Mechanical			
Chip Length	CL	2500	μm
Chip Width	W	500	μm
Weight		0.05	g
Operating Temp.**		-40 to 100	$^{\circ}C$
Storage Temp.		-40 to 100	$^{\circ}C$

**Specified operating conditions are based on 20°C heat sink temperature. High temperature operation will reduce performance and MTTF.

**Specified values are based on the P-side down configuration and rated at a constant heat sink temperature of 20°C. Unless otherwise indicated all values are nominal.



CHIP ATTRIBUTES	
WAVELENGTH	1550nm ± 20 nm
APERTURE WIDTH	4 $\mu m \pm 1\mu m$
CHIP WIDTH	0.500mm $\pm 10\mu m$
THICKNESS	160 $\mu m \pm 10\mu m$
CAVITY LENGTH	2.5mm $\pm 10\mu m$

P-METAL		
MATERIAL	THICKNESS (nm)	TOLERANCE (nm)
Ti	50	± 10
Pt	125	± 25
Au	250	± 50

N-METAL		
MATERIAL	THICKNESS (nm)	TOLERANCE (nm)
Ti	30	± 10
Pt	125	± 25
Au	400	± 40

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