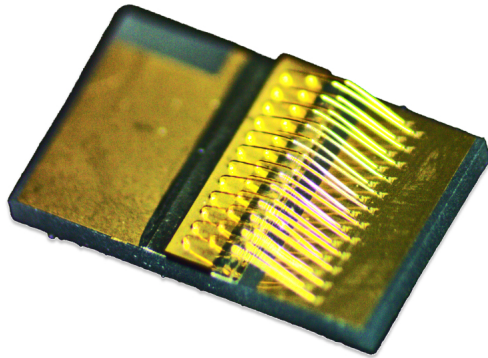
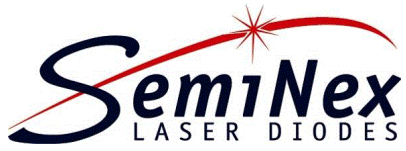


## Preliminary Data Sheet



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.



### Semiconductor Optical Amplifier

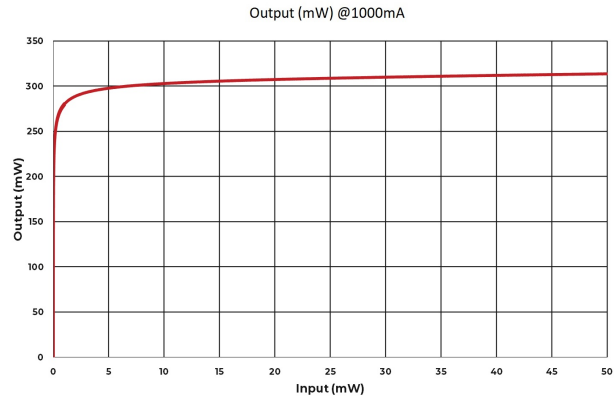
High Gain SemiNex SOA  
 High Saturation Output Power  
 Curved or Tilted Waveguide and Array  
 13xx and 15xx nm  
 Custom Design and Waveguide available

**Applications**

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

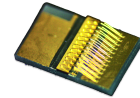
**Features**

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



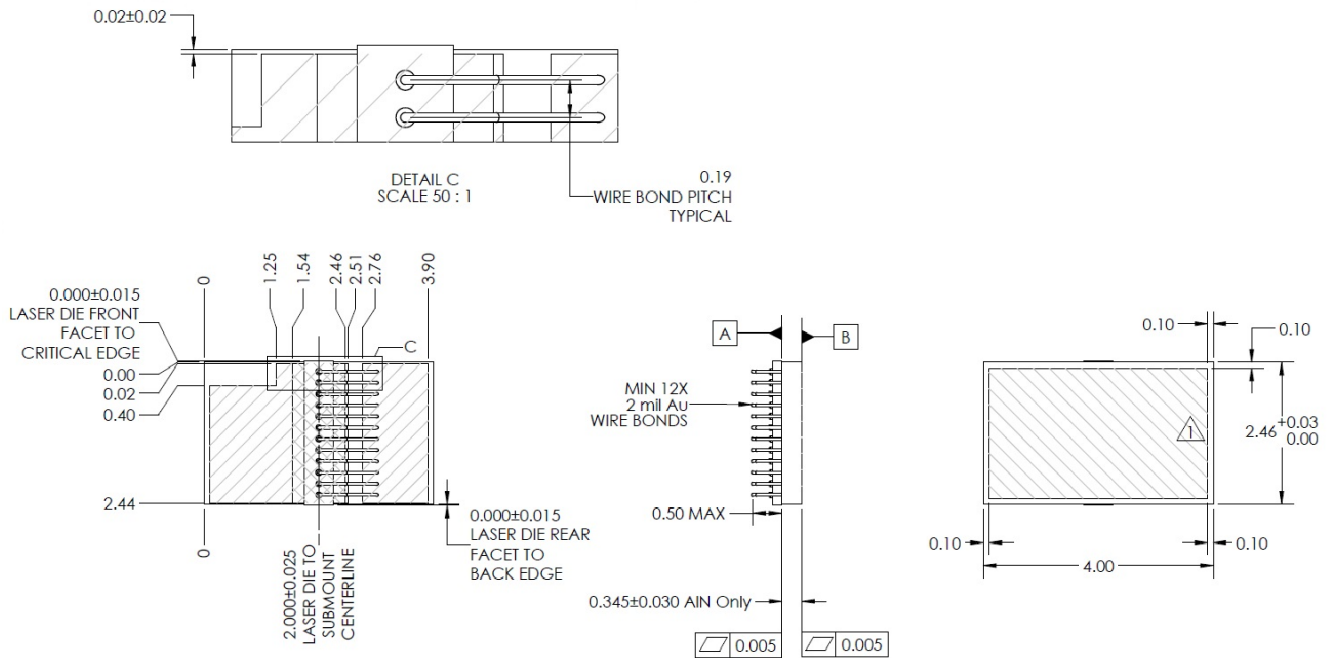


SOA Chips



	Symbol	COC-288	Units
<b>Optical</b>			
Wavelength	$\lambda_c$	1310	nm ( $\pm 20$ )
Output Power@1000mA	$P_{out}$	450	mW ( $\pm 10\%$ )
Aperture Width	AW	4	$\mu m$
Aperture Height	AH	1	$\mu m$
Spectral Width	$\delta\lambda$	85	nm @ 3dB
Gain @ $P_{in}=10\mu W$	G	40	dB
Beam Exit Angle	$\theta_{EXT}$	19.5	degree
Noise Figure	NF	6	dB
Polarization Extinction Ratio	PER	18	dB
Fast Axis Div.	$\theta_{perp}$	30	deg FWHM
Slow Axis Div.	$\theta_{parallel}$	16	deg FWHM
Front Facet Reflectivity		<0.1%	
Rear Facet Reflectivity		<0.1%	
Waveguide		Curved	
<b>Electrical</b>			
Operating Voltage	$V_{op}$	2	V
Operating Current	$I_{op}$	1	A
<b>Mechanical</b>			
Chip Length	CL	2500	$\mu m$
Chip Width	W	500	$\mu m$
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.



**NOTES:**

1) METALIZATION:

A-SIDE

- : Ti (0.06 $\mu m$  NOM) / Pt (0.2±0.04 $\mu m$ ) / Au (0.6 $\mu m$ ±0.12 $\mu m$ )
- : Pt (0.32 $\mu m$ ±0.064 $\mu m$ ) / AuSn: Au 70±5wt% (3.0±0.6 $\mu m$ )

B-SIDE

- : Ti (0.06 $\mu m$  NOM) / Pt (0.2±0.04 $\mu m$ ) / Au (0.6 $\mu m$ ±0.12 $\mu m$ )

2) EDGE QUALITY:

- NO BURRS AND NO CHIPPING OF AREA
- CHIPPING OF DETAIL "C" < 40 $\mu m$
- OTHER EDGE CHIPPING < 50 $\mu m$

3) ARROW ON P-SIDE OF LASER DIE POINTS TOWARD THE FRONT FACET

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Date Created: Nov 30 2023 10:23PM UTC