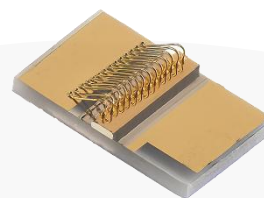


# High Power SOA Chip on Carrier



## Part Number: COC-287 / COC-287C

High Power SOA Chip on Carrier  
Single-Mode SOA  
Wavelength at 1520nm & 1550nm C-band



## Features

- High Output Power
- Broad Gain Bandwidth
- High Dynamic Range
- High Efficiency
- Standard SOA Chip on Carrier
- Cost Effective

## Application

- Optical Fiber Communications
- Coherent LiDAR
- Free Space Communications
- Network Test Equipment



SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb 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.

# High Power SOA Chip on Carriers



## Specification

COC-287 / COC-287C



Optical	Symbol	Typ. COC-287	Typ. COC-287C	Units
Center Wavelength	$\lambda_c$	1520	1550nm	nm
Output Power @1A*	P <sub>out</sub>	0.375	0.375	watts
Aperture Width	AW	4	4	$\mu\text{m}$
Aperture Height	AH	1	1	$\mu\text{m}$
3dB Bandwidth	BW	80	80	nm
Gain @ Pin = 10 $\mu$ W	G	32	32	dB
Gain Bandwidth	BW	80	80	nm
Beam Exit Angle	$\theta_{EXT}$	19.5	19.5	degree
Noise Figure	NF	7	7	dB
Polarization Extinction Ratio	PER	18	18	dB
Fast Axis Div.	$\theta_{\perp}$	30	30	deg FWHM
Slow Axis Div.	$\theta_{\parallel}$	20	20	deg FWHM
Front Facet Reflectivity		<0.1%	<0.1%	
Rear Face Reflectivity		<0.1%	<0.1%	
Waveguide		Tilted Straight	Tilted Straight	
Electrical	Symbol			Units
Operating Current	I <sub>op</sub>	1	1	A
Operating Voltage	V <sub>op</sub>	2	2	V
Mechanical		Range	Range	Units
Chip Width		500	500	$\mu\text{m}$
Operating Temp.**		-20 to 75	-20 to 75	°C
Storage Temp.		-40 to 85	-40 to 85	°C

\*Optical Power for 1310nm COC-288 and COC-290 with SOA drive current @ 1A and estimated Pin @ 10mW

\*Optical Power for 1550nm COC-285 and COC-287 with SOA drive current @ 1A and estimated Pin @ 21mW

\* Optical output power depends on the seed laser power, coupling efficiency, and thermal management.

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

\*\*High temperature operation will reduce performance and MTTF.

Unless otherwise indicated all values are nominal.

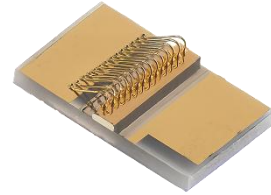
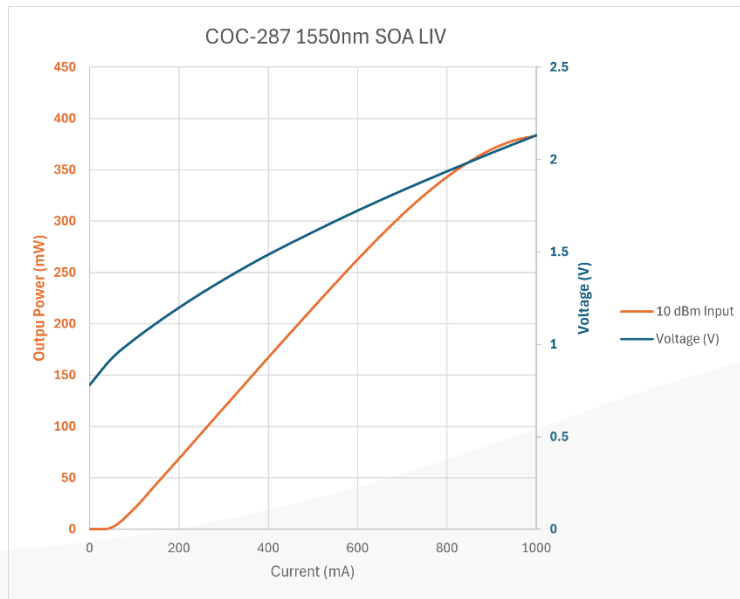
# High Power SOA Chip on Carriers



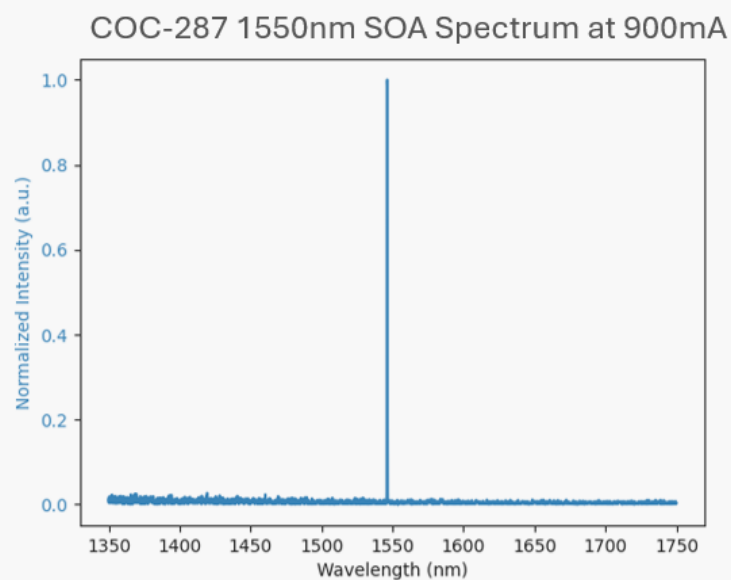
## SemiNex SOA COC-287 & COC-287C

### Graphs & Data

#### Typical COC L-I-V Characteristics



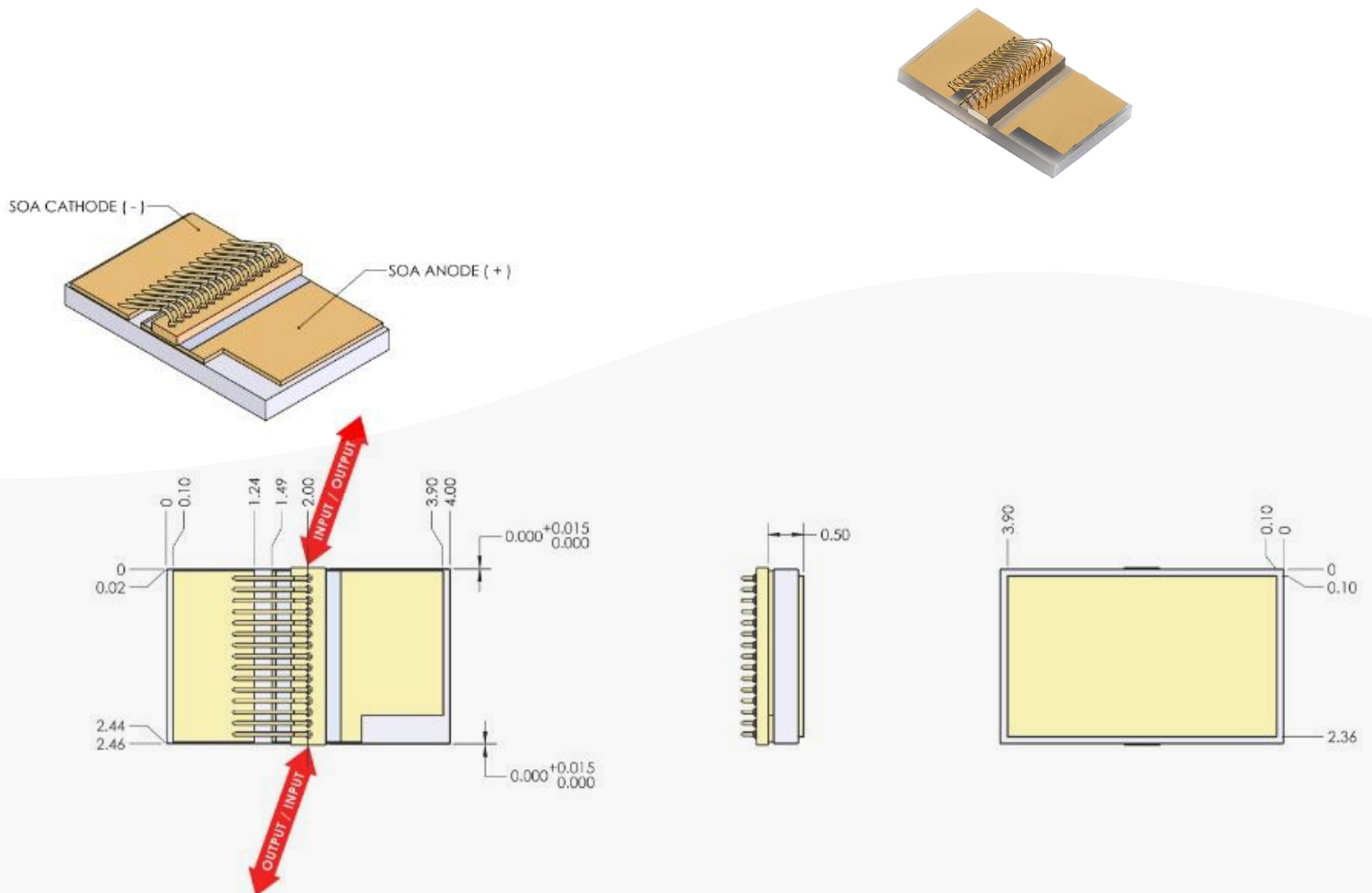
#### Typical COC Output Spectrum



# High Power SOA Chip on Carriers



## Mechanical Drawing



All statements, technical information and recommendations related to the product herein are based upon information believed to be reliable or accurate. The accuracy or completeness herein is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. SemiNex Corporation reserves the right to change at any time without notice the design, specification, deduction, fit or form of its described herein, including withdrawal at any time of a product offered for sale herein. Users are encouraged to visit [www.seminex.com](http://www.seminex.com) for the latest data. SemiNex Corporation makes no representations that the products herein are free from any intellectual property claims of others. Please contact SemiNex for more information. 2024 SemiNex Corporation

