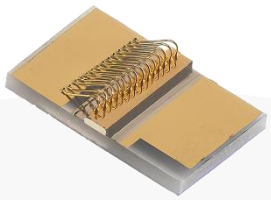
High Power SOA Chip on Carrier

Part Number: COC-290 / COC-290O

High Power SOA Chip on Carrier
Single-Mode SOA Tilted Straight Waveguide
Wavelength at 1280nm & 1310nm O-band



Features

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

Application

- Optical Communications
- 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.

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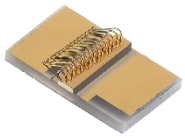
Specification

COC-290 / COC-290O



Optical	Symbol	Typ. COC-290	Typ. COC-290O	Units
Center Wavelength	λ_c	1280	1310	nm
Output Power @1A*	P_{out}	0.45	0.45	Watts (±10%)
Aperture Width	AW	4	4	µm
Aperture Height	AH	1	1	µm
Gain @ Pin = 10µW	G	35	35	dB
Gain Bandwidth	BW	80	80	nm
Beam Exit Angle	θ_{EXT}	19.5	19.5	Degree
Noise Figure	NF	6	6	dB
Polarization Extinction Ratio	PER	18	18	dB
Fast Axis Div.	$\Theta\perp$	30	30	Deg FWHM
Slow Axis Div.	$\Theta\parallel$	16	16	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_{op}	1	1	A
Operating Voltage	V_{op}	2	2	V
Mechanical		**Range**	**Range**	**Units**
Chip Width		500	500	µm
Operating Temp.**		-40 to 100	-40 to 100	°C
Storage Temp.		-40 to 100	-40 to 100	°C

*Optical Power for 1310nm COC-288 and COC-290 with SOA drive current @ 1A and estimated Pin @ 7mW
*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.

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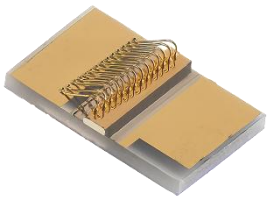
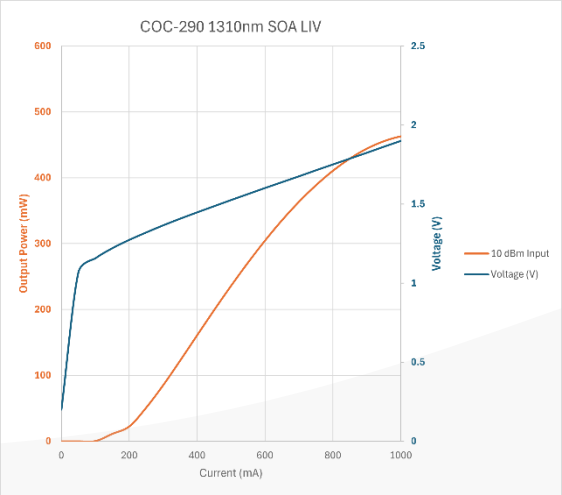
SemiNex SOA COC-290 & COC-290O

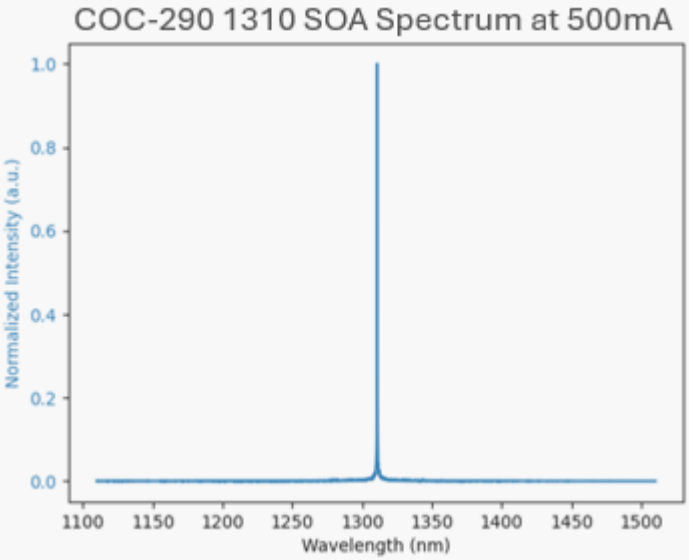
Graphs & Data

Typical COC L-I-V Characteristics





Typical COC Output Spectrum



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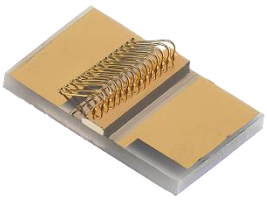
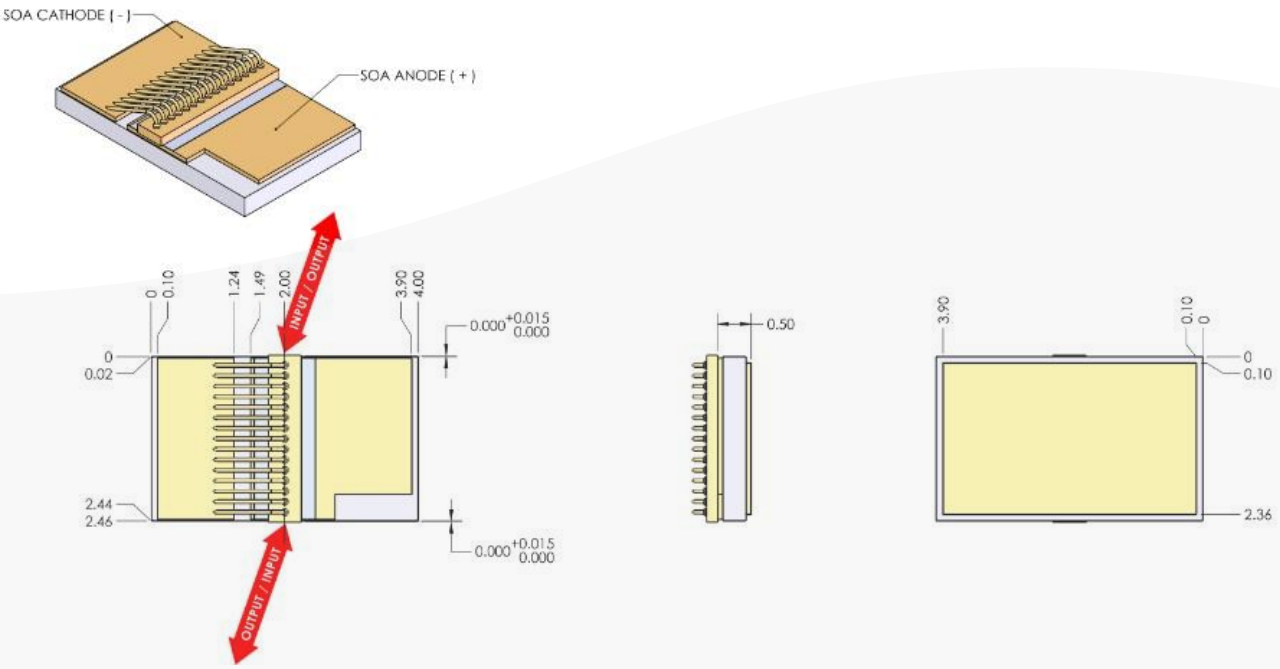
Mechanical Drawing





*Graphs and Data were collected from mounted parts

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