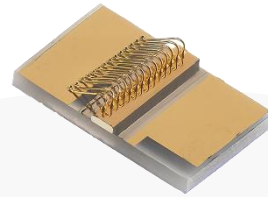


High Power SOA Chip on Carrier



Part Number: COC-290 / COC-2900

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.

High Power SOA Chip on Carriers



Specification

COC-290 / COC-2900



| Optical | Symbol | Typ. COC-290 | Typ. COC-2900 | 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. | θ _⊥ | 30 | 30 | Deg FWHM |
| Slow Axis Div. | θ | 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.

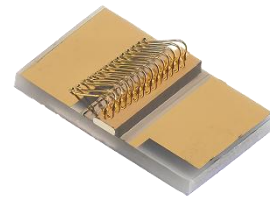
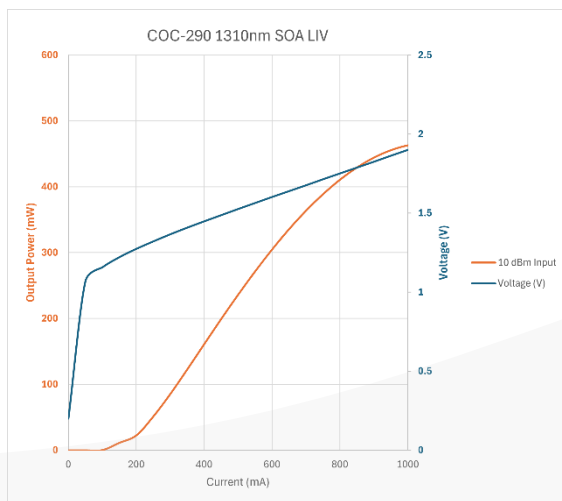
High Power SOA Chip on Carriers



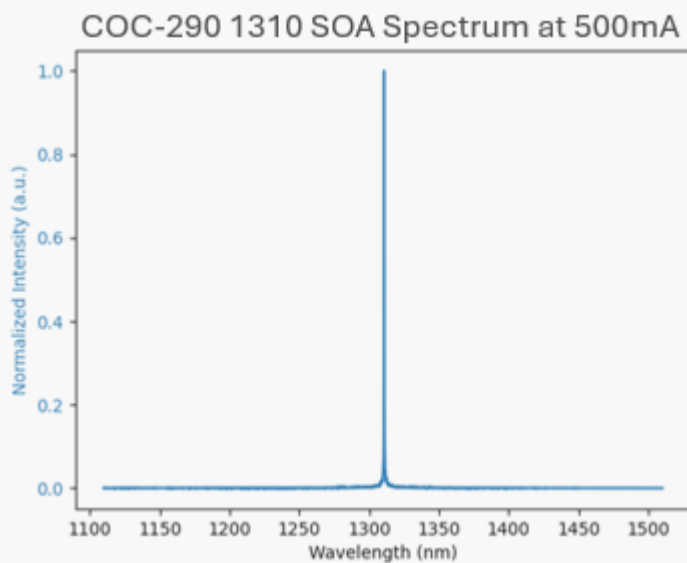
SemiNex SOA COC-290 & COC-2900

Graphs & Data

Typical COC L-I-V Characteristics



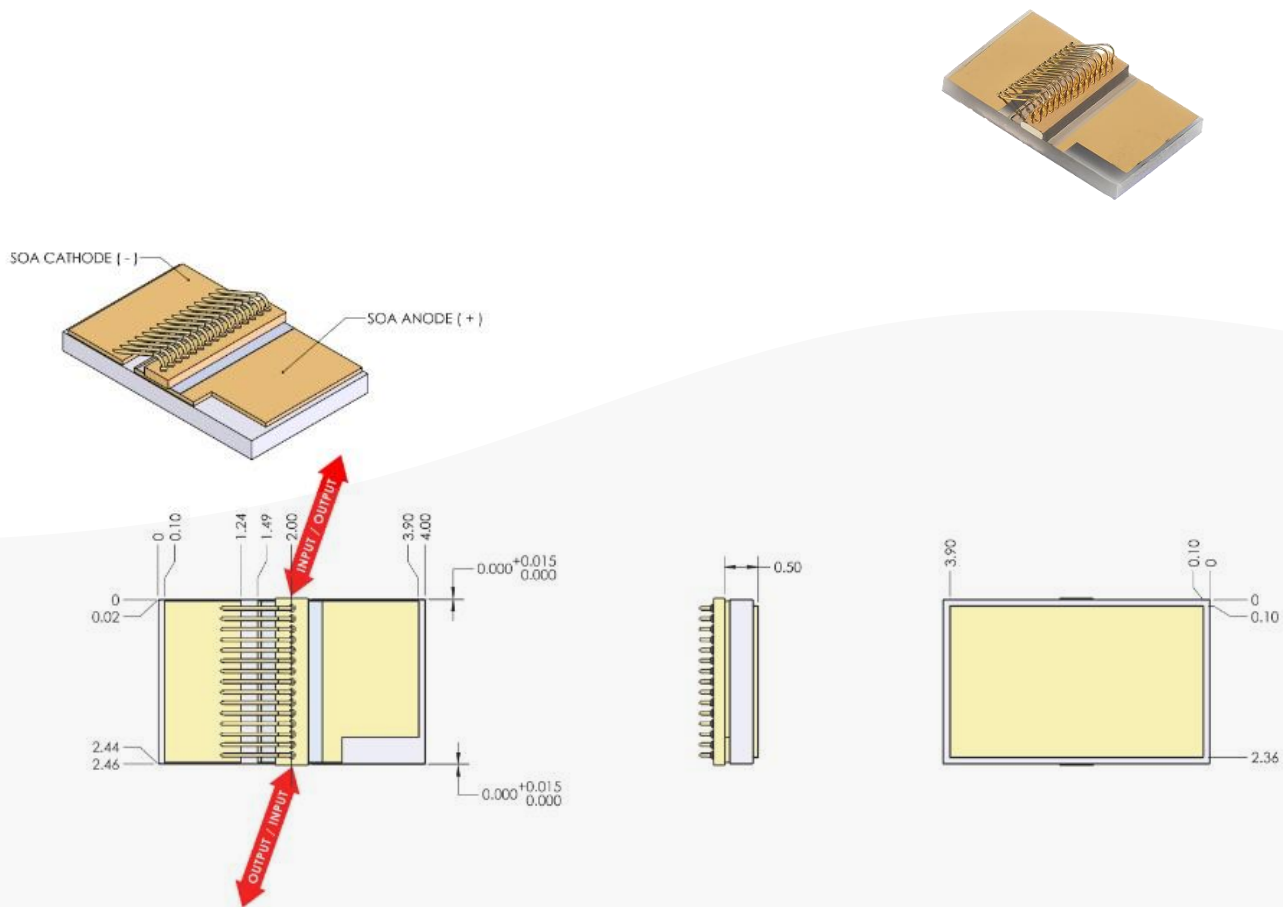
Typical COC Output Spectrum



High Power SOA Chip on Carriers



Mechanical Drawing



*Graphs and Data were collected from mounted parts

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