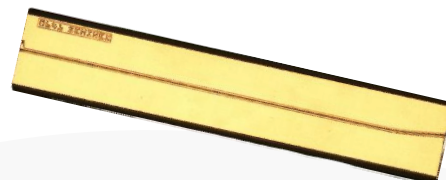


High Power RSOA Chip



Part Number: CHP-289

High Power RSOA Chip
Single-Mode RSOA Fabry-Perot
Wavelength at 1310nm



Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard ROSA Bare Die
- Cost Effective

Application

- OTDR
- LiDAR
- Free Space Communications
- Network Test Equipment



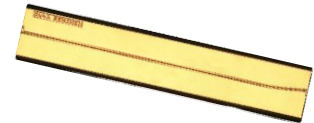
SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars, and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements.

High Power RSOA Chip



Specification

CHP-289



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1310	nm
Aperture Width	AW	4	μm
Aperture Height	AH	1	μm
Beam Exit Angle	θ_{EXT}	19.5	Degree
Noise Figure	NF	6	dB
Polarization Extinction Ratio	PER	18	dB
Fast Axis Div.	$\theta_{\perp}$	28	Deg FWHM
Slow Axis Div.	$\theta_{\parallel}$	16	Deg FWHM
Front Facet Reflectivity		<0.1%	
Rear Face Reflectivity		98%	
Waveguide		Curved	
Electrical	Symbol		Units
Operating Current	I_{op}	1	A
Operating Voltage	V_{op}	2	V
Mechanical		Range	Units
Chip Length		2500	μm
Chip Width		500	μm
Operating Temp. **		-20 to 75	$^{\circ}\text{C}$
Storage Temp.		-40 to 85	$^{\circ}\text{C}$

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.

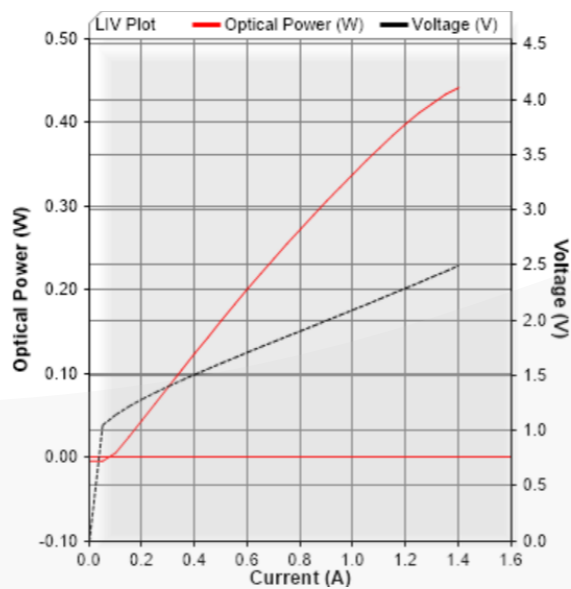
High Power RSOA Chip



SemiNex RSOA CHP-289

Graphs & Data

Typical CHP L-I-V Characteristics



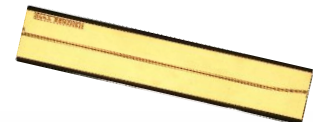
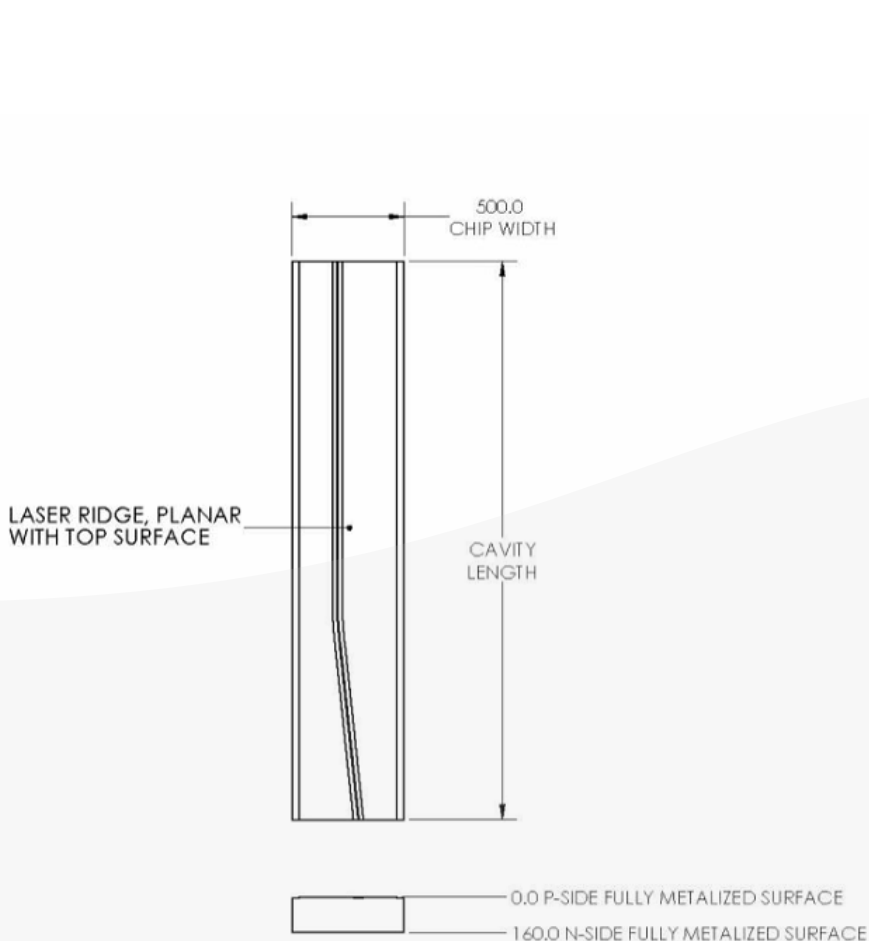
*Graphs and Data were collected from mounted parts

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High Power RSOA Chip



Mechanical Drawing



CHIP ATTRIBUTES	
WAVELENGTH	1310nm $\pm$ 20nm
APERTURE WIDTH	4 μ m $\pm$ 1 μ m
CHIP WIDTH	0.500mm $\pm$ 10 μ m
THICKNESS	160 μ m $\pm$ 10 μ m
CAVITY LENGTH	2.5mm $\pm$ 10 μ m

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

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

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