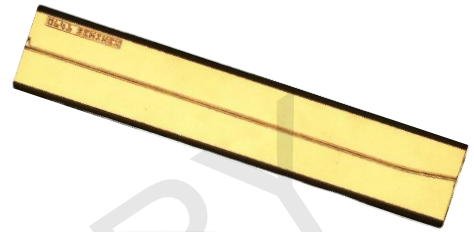


High Power RSOA Chip



Part Number: CHP-310

High Power RSOA Chip
Single-Mode RSOA Curved Waveguide
Wavelength at C band, 1550nm



Features

- 1mm RSOA Chip
- High Dynamic Range
- High Efficiency
- Standard RSOA Bare Die
- Cost Effective

Application

- Gain Element for External Cavity Laser
- 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.

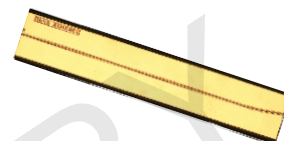
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High Power RSOA Chip



Specification

CHP-310



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1550	nm
ASE Output Power @ 0.45A	P _{out}	6	mW
Aperture Width	AW	4	μm
Aperture Height	AH	1	μm
Spectral Width	$\Delta\lambda$	80	nm @ 3dB
Beam Exit Angle	θ_{EXT}	19.5	Degree
Fast Axis Div.	θ_{\perp}	30	Deg FWHM
Slow Axis Div.	θ_{\parallel}	20	Deg FWHM
Front Facet Reflectivity		<0.1%	
Rear Face Reflectivity		98%	
Waveguide		Curved	
Electrical	Symbol		Units
Operating Current	I _{op}	0.45	A
Operating Voltage	V _{op}	2	V
Mechanical		Range	Units
Chip Width		500	μm
Operating Temp.**		-20 to 75	°C
Storage Temp.		-40 to 85	°C

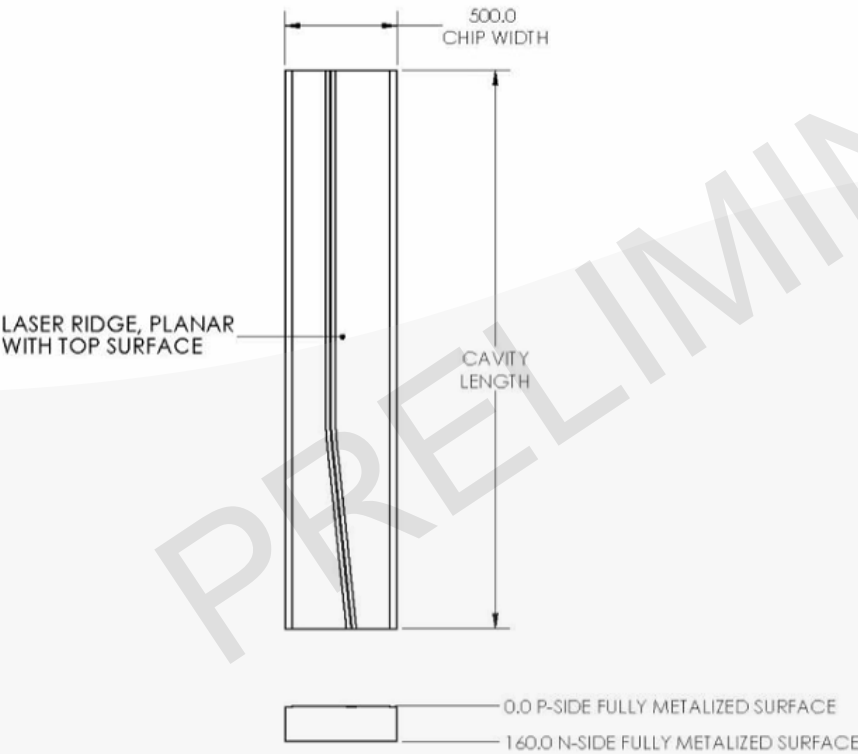
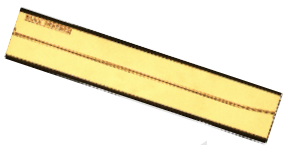
*Specified values are rated at a constant heat sink temperature of 20°C.

**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

High Power RSOA Chip



Mechanical Drawing



CHIP ATTRIBUTES	
WAVELENGTH	1550nm ±20nm
APERTURE WIDTH	4µm ±1µm
CHIP WIDTH	0.500mm ±10µm
THICKNESS	160µm ±10µm
CAVITY LENGTH	2.5mm ±10µm

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

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

*Chip length of CHP-310 is 1mm. The diagram shown is for 2.5mm chip length.

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