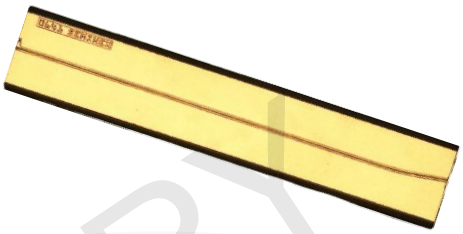
High Power RSOA Chip

Part Number: CHP-312



High Power RSOA Chip
Single-Mode RSOA Curved Waveguide
Wavelength at O band, 1310nm

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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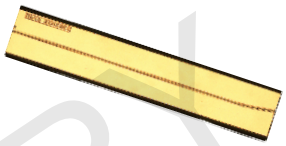
High Power RSOA Chip

Specification

CHP-310

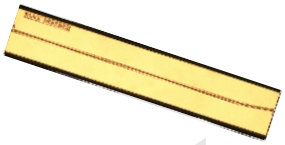


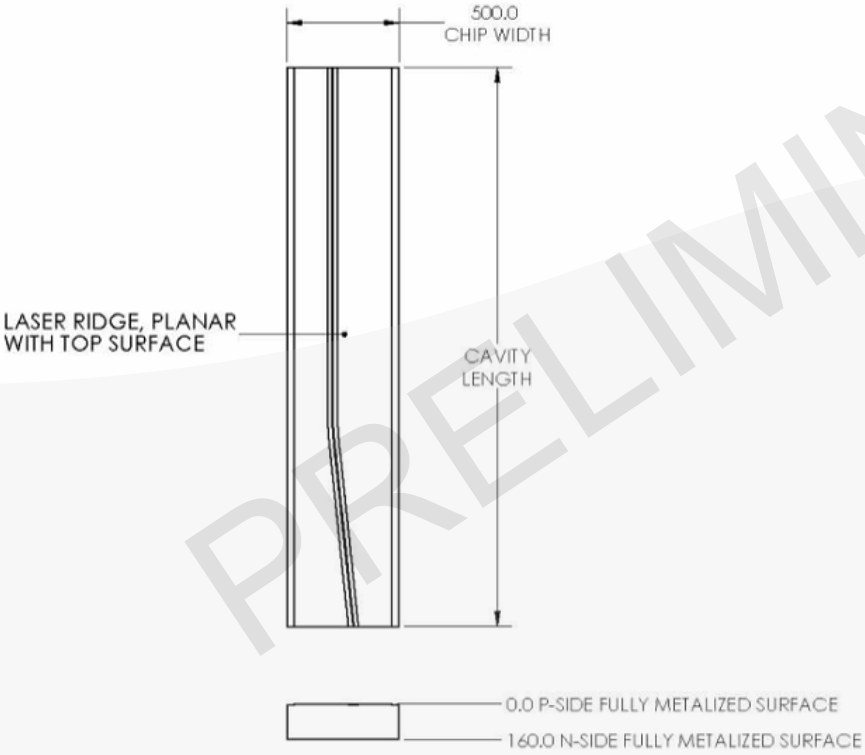
Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1310	nm
ASE Output Power @ 0.45A	Pout	6	mW
Aperture Width	AW	4	µm
Aperture Height	AH	1	µm
Spectral Width	$\Delta\lambda$	80	nm @ 3dB
Beam Exit Angle	θ_{EXT}	19.5	Degree
Fast Axis Div.	$\Theta_{\perp}$	30	Deg FWHM
Slow Axis Div.	$\Theta_{\parallel}$	20	Deg 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-312 is 1mm & Wavelength is 1310nm. The diagram shown is for 2.5mm chip length with a wavelength of 1550nm.

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