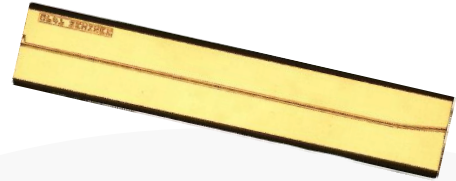


High Power RSOA Chip



Part Number: CHP-286

High Power RSOA Chip
Single-Mode RSOA Fabry-Perot
Wavelength at 1550nm



Features

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

Application

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



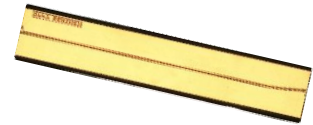
SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars, and packages are tested to meet customer 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-286



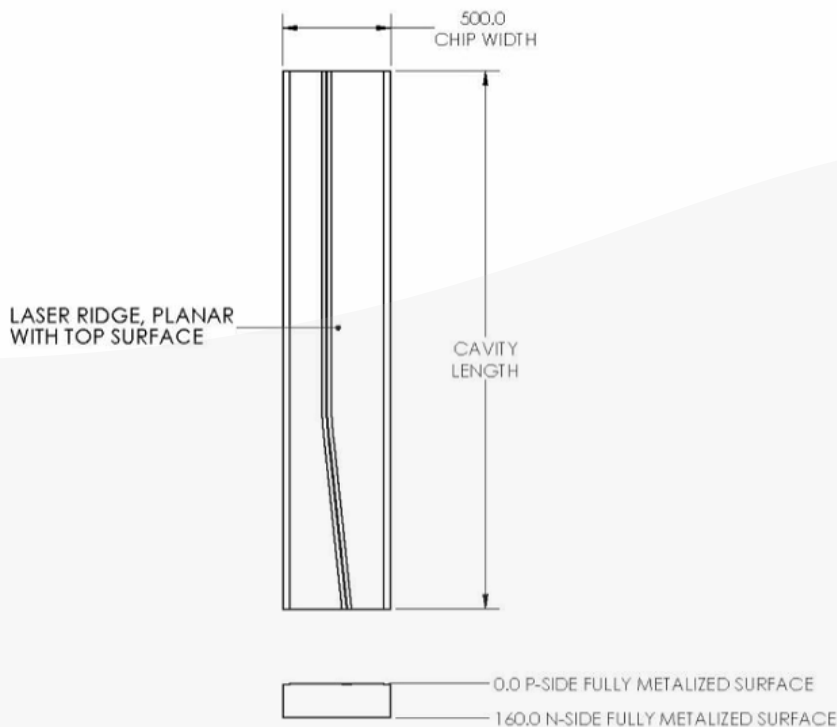
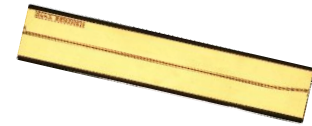
| Optical | Symbol | Typ. | Units |
|-------------------------------|-----------------------|-----------|--------------------|
| Center Wavelength | λ_c | 1550 | nm |
| Aperture Width | AW | 4 | μm |
| Aperture Height | AH | 1 | μm |
| Beam Exit Angle | θ_{EXT} | 19.5 | Degree |
| Noise Figure | NF | 5 | dB |
| Polarization Extinction Ratio | PER | 18 | dB |
| 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 | | | 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



Mechanical Drawing



| CHIP ATTRIBUTES | |
|-----------------|---------------|
| WAVELENGTH | 1,550nm ±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 |

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