

# High Power Laser Diode Chip on Carrier



## Part Number: COC-106

High Power Chip on Carriers  
Multi-Mode Fabry-Perot  
Pulsed Wavelength at 1550nm



## Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard Chip on Carrier
- Cost Effective

## Application

- Laser Rangefinders
- Target Illumination



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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## Specification

COC-106



Optical	Symbol	Typ.	Units
Center Wavelength	$\lambda_c$	1550	nm ( $\pm 20$ )
Output Power (<10ns)*	$P_{out}$	40	watts ( $\pm 10\%$ )
Output Power (150ns)*	$P_{out}$	24	watts ( $\pm 10\%$ )
Emitter Width	$W$	180	$\mu m$
Spectral Width FWHM	$\Delta\lambda$	15	nm
Slope Efficiency	$\eta$	0.25	W/A
Fast Axis Div.	$\theta_{\perp}$	28	deg FWHM
Slow Axis Div.	$\theta_{\parallel}$	14	deg FWHM
Electrical	Symbol		Units
Power Conversion Eff.	$\eta$	4	%
Operating Current (<10ns)	$I_{op}$	160	A
Operating Current (<150ns)	$I_{op}$	80	A
Threshold Current	$I_{TH}$	2	A
Operating Voltage	$V_{op}$	7	V
Duty Cycle	DC	0.1	%
Mechanical		Range	Units
Operating Temp.**		-40 to 60	$^{\circ}C$
Storage Temp.		-40 to 80	$^{\circ}C$

\*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.

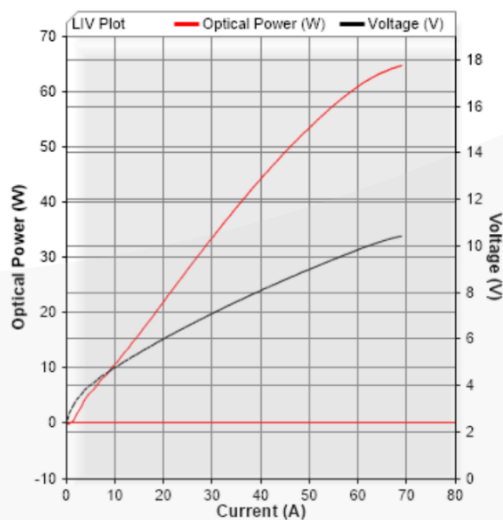
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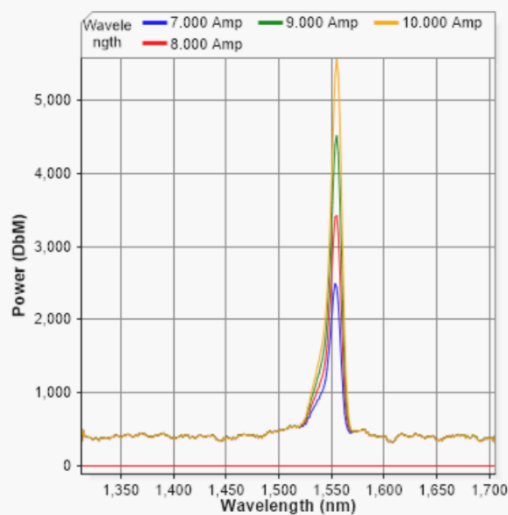
## SemiNex Laser Diodes COC-106

### Graphs & Data

#### Typical COC L-I-V Characteristics



#### Typical COC Output Spectrum

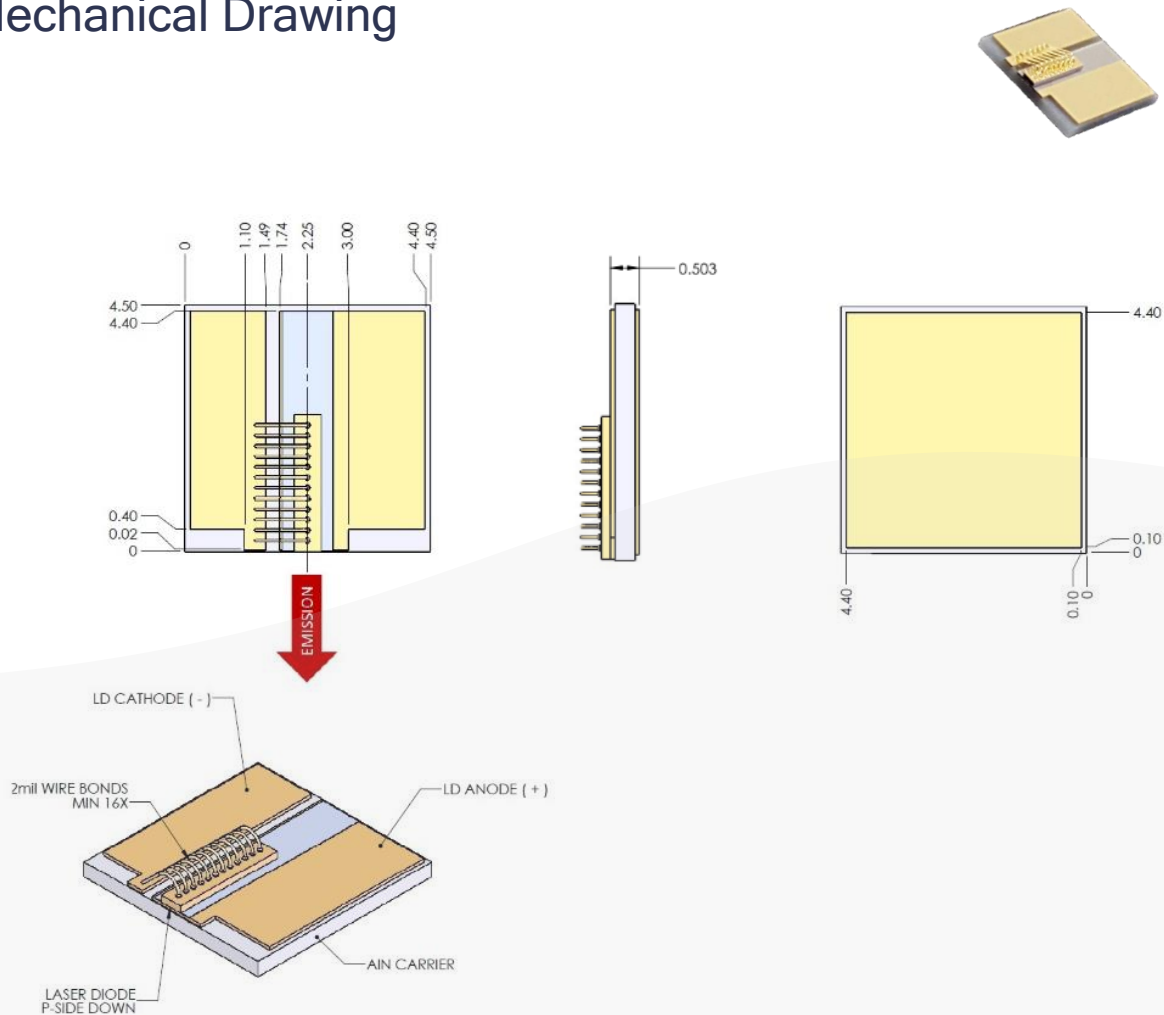


\*Tested with 150nsec pulse @ 0.1% Duty Cycle

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## Mechanical Drawing



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