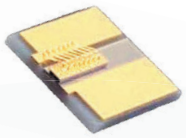
High Power Laser Diode Chip on Carrier

Part Number: COC-105

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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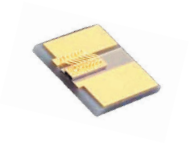
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High Power Laser Diode Chip on Carrier

SemiNex CORPORATION

Specification

COC-105



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1550	nm (±20)
Output Power (<10ns)*	P_{out}	14	watts (±10%)
Output Power (150ns)*	P_{out}	9	watts (±10%)
Emitter Width	W	50	µm
Spectral Width FWHM	$\Delta\lambda$	15	nm
Slope Efficiency	η	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.	η	2.7	%
Operating Current (<10ns)	I_{op}	70	A
Operating Current (<150ns)	I_{op}	35	A
Threshold Current	I_{TH}	0.5	A
Operating Voltage	V_{op}	8.6	V
Duty Cycle	DC	0.1	%
Mechanical		**Range**	**Units**
Operating Temp.**		-40 to 60	°C
Storage Temp.		-40 to 80	°C

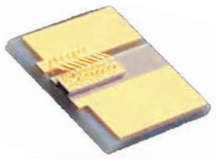
*Specified values are rated at a constant heat sink temperature of 20°C.
**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

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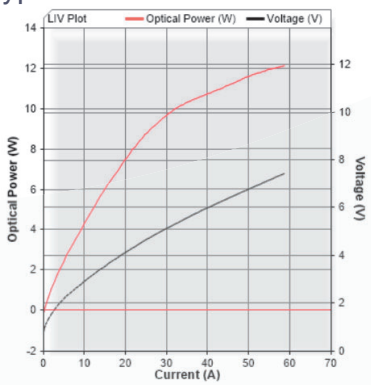
High Power Laser Diode Chip on Carrier

SemiNex Laser Diodes COC-105

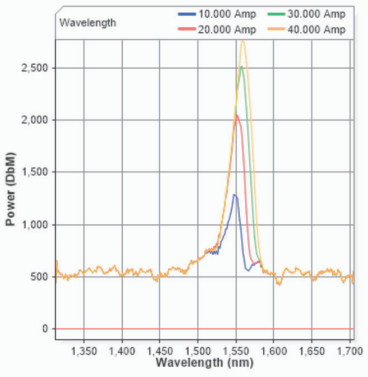


Graphs & Data

Typical COC L-I-V Characteristics



Typical COC Output Spectrum



*Tested with 150nsec pulse @ 0.1% Duty Cycle

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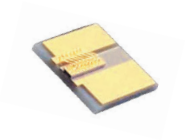
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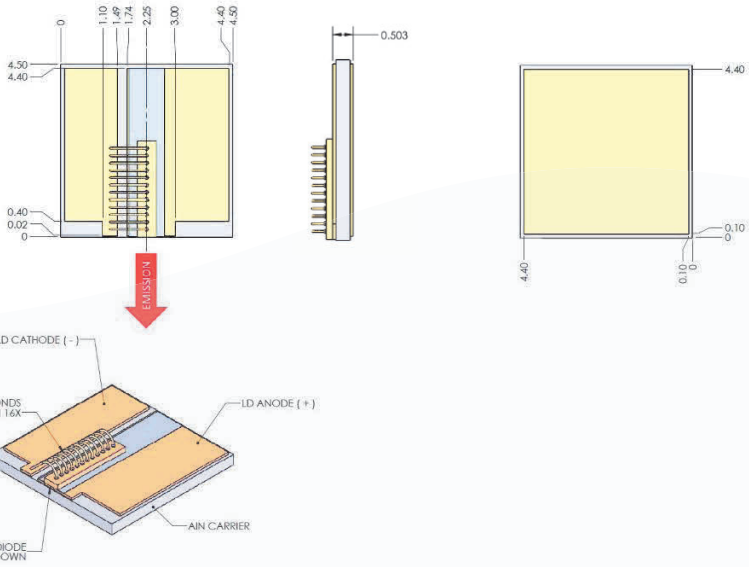
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High Power Laser Diode Chip on Carrier

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Mechanical Drawing





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