

High Power Multi-Mode SemiNex Lasers  
 3 Watts of Continuous Operation Power  
 1470, 1532, or 1550 nm Wavelength  
 Chip on Submount Packaging

SemiNex delivers the highest available CW power at infrared wavelengths. SemiNex will optimize the design of its laser chips to meet customers' optical and electrical performance specifications. Diodes are mounted and tested to meet custom applications. Typical results and packaging options are shown below. Contact SemiNex for additional details or to discuss your application.

**Key Features**

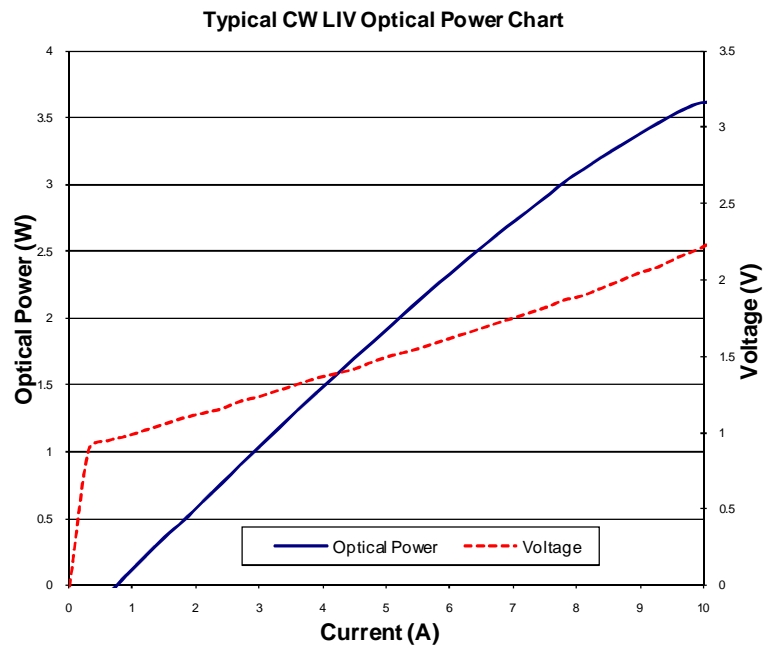
- High output power
- High dynamic power range
- High efficiency
- Custom packaging

**Applications**

- Medical laser equipment
- LIDAR
- Free Space Optical Communication
- DPSS pump lasers
- Military / Aerospace

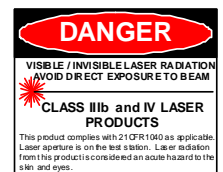
	Symbol	Typical	Units
<b>Optical</b>			
Output power (CW)	$P_o$	3	watts
Center Wavelength Range	$\lambda_c$	1470, 1532, 1550	nm
Emitter Width	$W$	95	$\mu\text{m}$
Emitter Height	$H$	1	$\mu\text{m}$
Spectral Width	$\Delta\lambda$	10	nm 3dB
Slope Efficiency	$\eta_o$	0.5	W/A
Fast Axis Divergence	$\theta_{\text{perp}}$	26	deg FWHM
Slow Axis Divergence	$\theta_{\text{parallel}}$	8	deg FWHM
Wavelength Temp. Coeff.	$\lambda_{\text{coef}}$	0.7	nm/C

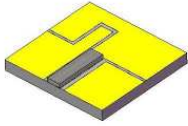
<b>Electrical</b>			
Power conversion Efficiency	$\eta$	0.5	
Threshold Current	$I_{\text{th}}$	0.45	A
Operating Current	$I_{\text{op}}$	8	A
Operating Voltage	$V_{\text{op}}$	2.0	V
Series Resistance	$R_s$	0.05	ohm



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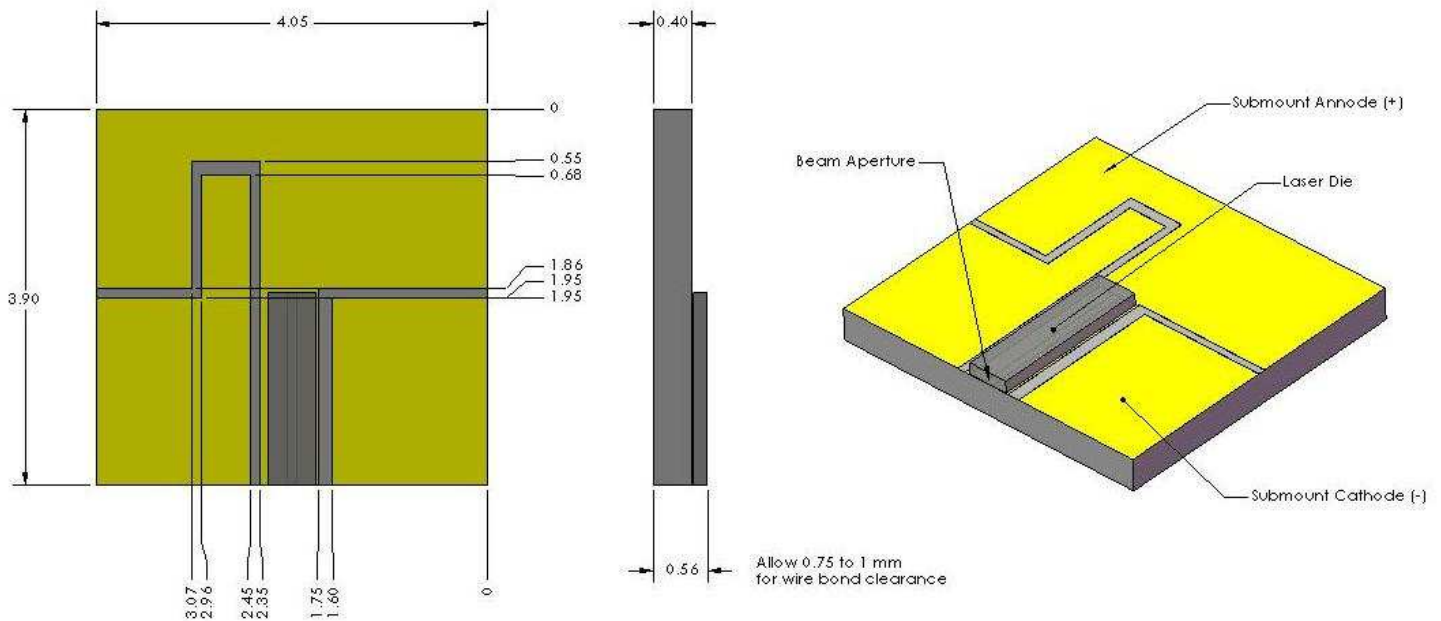
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	Symbol	COC-1470-3-95	COC-1532-3-95	COC-1550-3-95	Units
<b>Optical</b>					
Output power (CW)	$P_o$	3	2.1	2.1	watts
Center Wavelength	$\lambda_c$	1470	1532	1550	nm
Emitter Width	W	95	95	95	$\mu\text{m}$
Emitter Height	H	1	1	1	$\mu\text{m}$
Spectral Width	$\Delta\lambda$	10 - 20	10 - 20	10 - 20	nm 3dB
Slope Efficiency	$\eta_o$	0.5	0.5	0.5	W/A
Fast Axis Divergence	$\theta_{\text{perp}}$	26-30	26-30	26-30	deg FWHM
Slow Axis Divergence	$\theta_{\text{parallel}}$	4 - 8	4- 8	4 - 8	deg FWHM

<b>Electrical</b>					
Power conversion Efficiency	$\eta$	0.5	0.5	0.5	
Threshold Current	$I_{\text{th}}$	0.45	0.45	0.45	A
Operating Current	$I_{\text{op}}$	8	8	8	A
Operating Voltage	$V_{\text{op}}$	2	2	2	V
Series Resistance	$R_s$	0.05	0.05	0.05	ohm



NOTE: Dimensions are in mm [in]

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