

# High Power Laser Diode C-mount



## Part Number: C-116

High Power C-mount  
Multi-Mode Fabry-Perot  
CW Wavelength at 1565nm  
Lensed Options Available



## Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard C-mount
- Cost Effective

## Application

- Professional Medical
- Defense / Aerospace



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

C-116



Optical	Symbol	Typ.	Units
Center Wavelength	$\lambda_c$	1565	nm ( $\pm 20$ )
Output Power (CW)*	$P_{out}$	4.2	watts ( $\pm 10\%$ )
Emitter Width	W	95	$\mu\text{m}$
Spectral Width FWHM	$\Delta\lambda$	15	nm
Slope Efficiency	$\eta$	0.35	W/A
Fast Axis Div.	$\theta_{\perp}$	28	deg FWHM
Slow Axis Div.	$\theta_{\parallel}$	9	deg FWHM
Electrical	Symbol		Units
Power Conversion Eff.	$\eta$	18	%
Threshold Current	$I_{TH}$	0.45	A
Operating Current	$I_{op}$	14	A
Operating Voltage	$V_{op}$	1.7	V
Mechanical	Symbol	Range	Units
Operating Temp.**		-40 to 60	$^{\circ}\text{C}$
Storage Temp.		-40 to 80	$^{\circ}\text{C}$

\*Specified values are rated at a constant heat sink temperature of 20 $^{\circ}\text{C}$ .

\*\*High temperature operation will reduce performance and MTTF.  
Unless otherwise indicated all values are nominal.

\*Available Lenses

Suffix	Description
-118	Lens Collimated $<10\text{mrad}$ $f=274\mu\text{m}$ , 5mm Lg
-134	Lens Matched $f=274\mu\text{m}$ , 5mm Lg
-141	Lens, FAC, $f=590\mu\text{m}$ , 5mm Lg, Collimated 5mrad
-186	Lens, FAC, $f=590\mu\text{m}$ , 5mm Lg, WD=50 $\mu\text{m}$

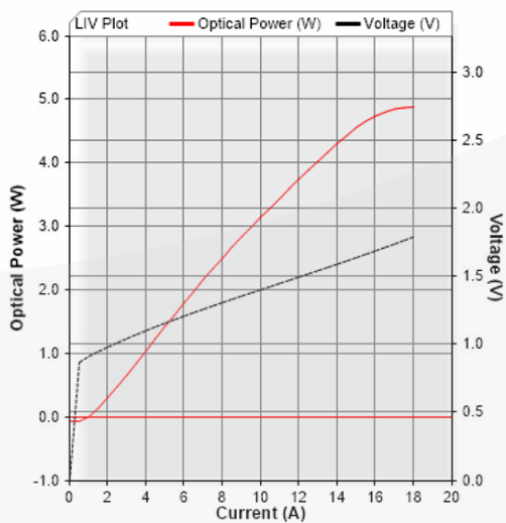
# High Power Laser Diode C-mount



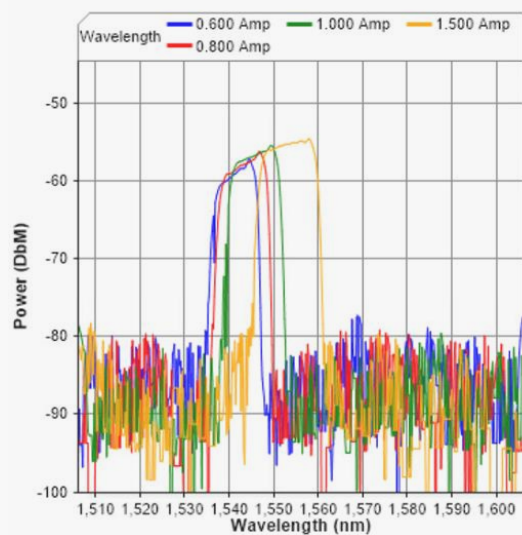
## SemiNex Laser Diodes C-116

### Graphs & Data

#### Typical C-mount L-I-V Characteristics



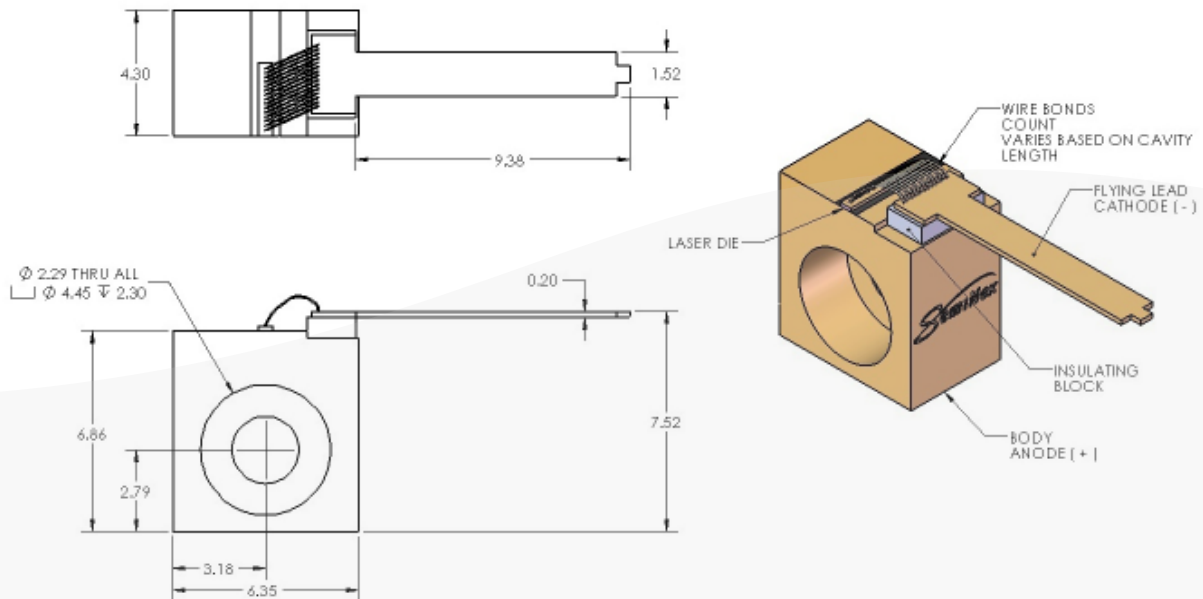
#### Typical C-mount Output Spectrum



# High Power Laser Diode C-mount



## Mechanical Drawing



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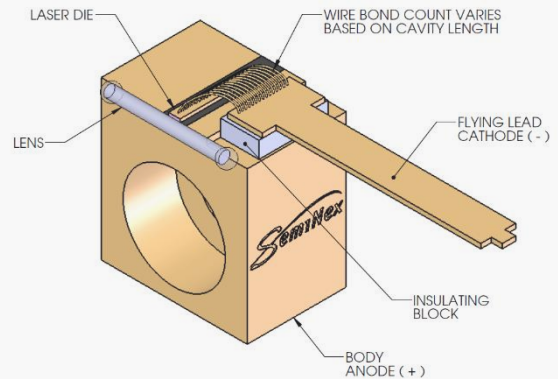
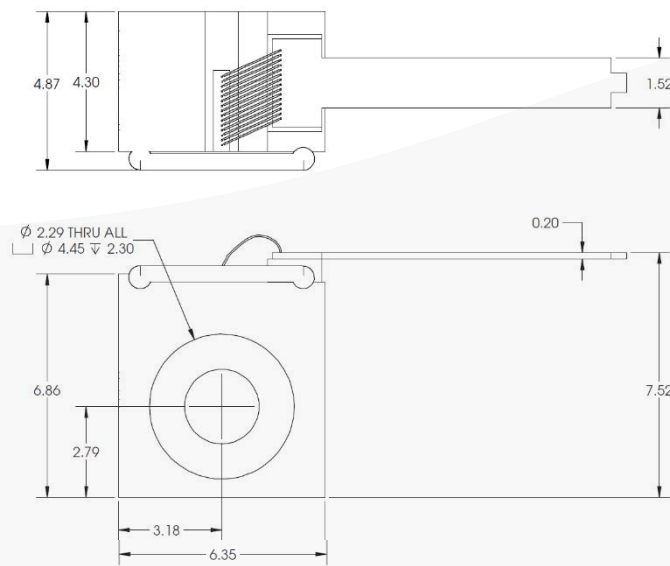
## Mechanical Drawing

C-116-118

C-116-134

C-116-141

C-116-186



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