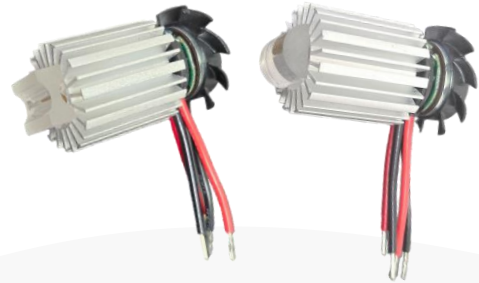


# High Power Laser Diode Laser Engine-Q Package



## Part Number: LEQ-122

High Power Laser Engine-Q Package  
Multi-Mode Fabry-Perot Laser Diode  
Wavelength at 1450nm



## Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Laser Engine-Q Package
- Cost Effective

## Application

- Home Medical



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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# High Power Laser Diode Laser Engine-Q Package



## Specification

LEQ-122



Optical	Symbol	Typ.	Units
Center Wavelength	$\lambda_c$	1450	nm ( $\pm 20$ )
Output Power (CW)*	$P_{out}$	2	watts ( $\pm 10\%$ )
Spectral Width	$\delta\lambda$	10	nm 3dB
X-Axis Divergence* with matched lens	$\Theta_X$	28	deg FMHW
Y -Axis Divergence* with matched lens	$\Theta_Y$	28	deg FWHM
X-Axis Divergence* with FAC lens	$\Theta_X$	10	deg FMHW
Y -Axis Divergence* with FAC lens	$\Theta_Y$	2	deg FWHM
Electrical	Symbol		Units
Power Conversion Eff.	$\eta$	16	%
Operating Current	$I_{op}$	8	A
Threshold Current	$I_{TH}$	0.5	A
Operating Voltage	$V_{op}$	1.7	V
Fan	Symbol		Units
Voltage (DC)	VDC	5	V
Power	watts	0.4	W
Air Flow	CFM	3	cubic feet/minute
		Range	
Operating Temp.**		-40 to 85	$^{\circ}C$
Storage Temp.		-40 to 85	$^{\circ}C$

\*Refer to Mechanical drawing.

\*\*Laser engine includes a Lens and a Cooling Fan

\*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.

\*Available Lenses & Caps

Part Number	Description
LEQ-122-178	LEQ lens SA Matched , f=1.36mm, with fan
LEQ-122-172	LEQ Lens Collimated FAC, f=7.7mm, with fan

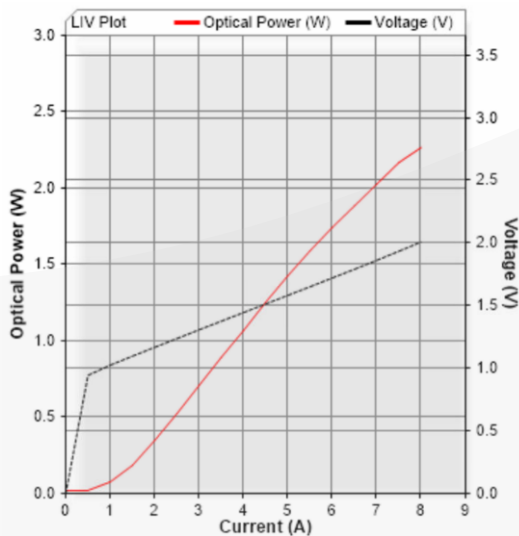
# High Power Laser Diode Laser Engine-Q Package



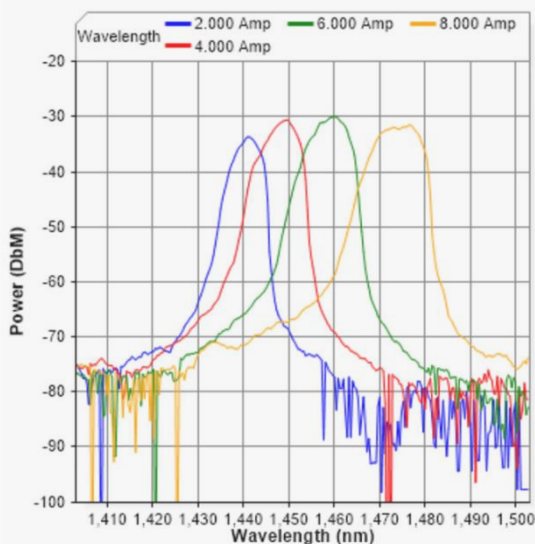
## SemiNex Laser Diodes LEQ-122

### Graphs & Data

#### Typical LEQ L-I-V Characteristics



#### Typical LEQ Output Spectrum



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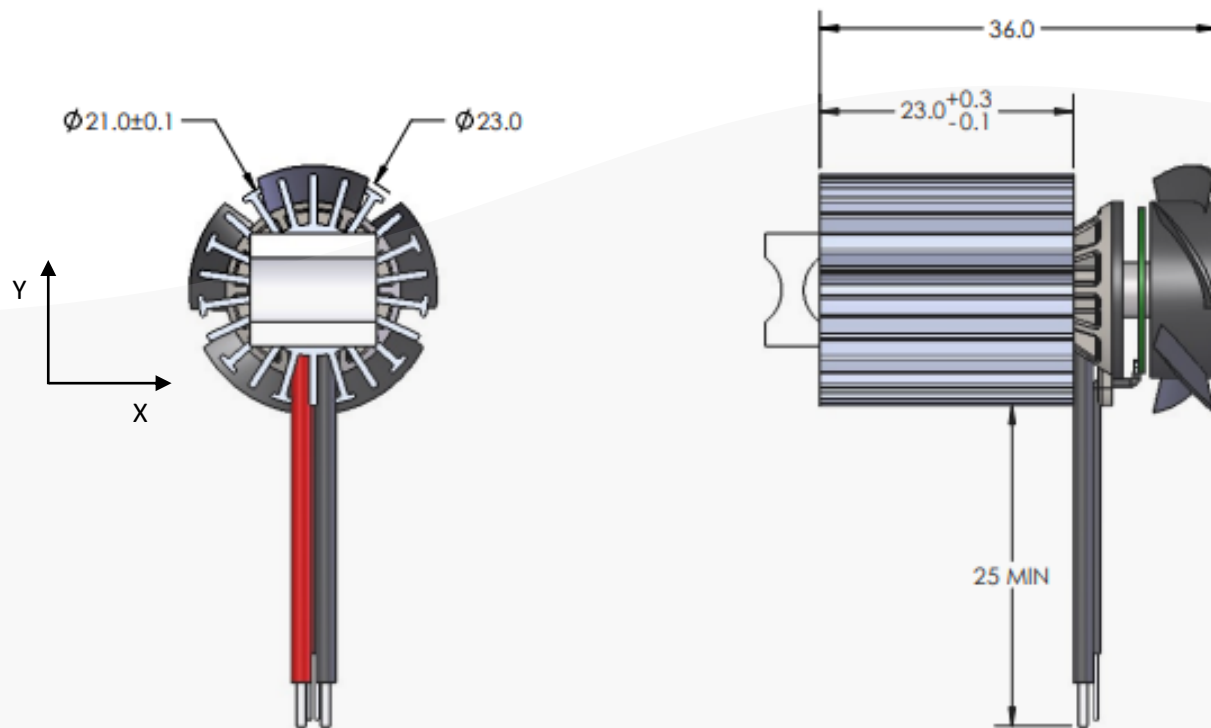
# High Power Laser Diode Laser Engine-Q Package



## Mechanical Drawing Part Number: LEQ-122-178



PIN OUT:	
1.	LD Anode (+), #20 AWG
2.	LD Cathode (-), #20 AWG
3.	FAN (+5V), #28 AWG
4.	FAN (-), #28 AWG



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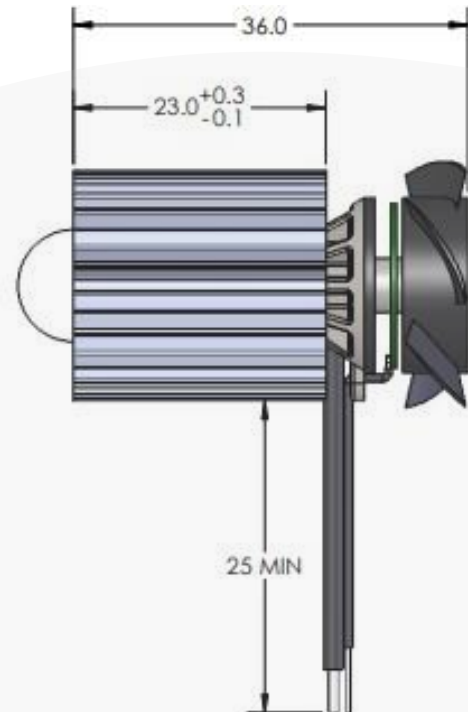
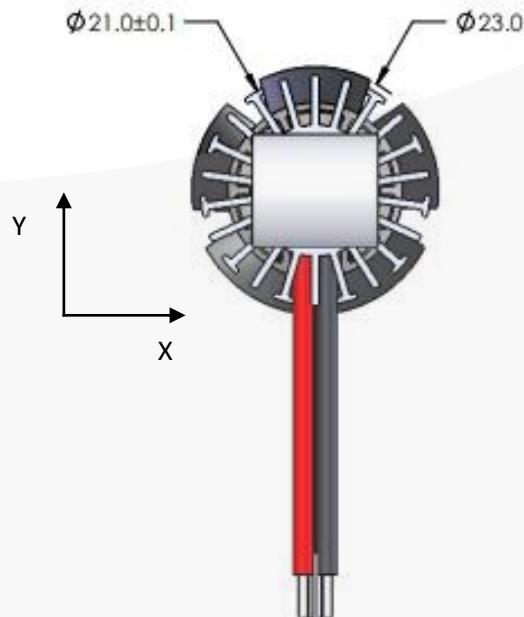
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# High Power Laser Diode Laser Engine-Q Package



## Mechanical Drawing Part Number: LEQ-122-172

PIN OUT:	
1.	LD Anode (+), #20 AWG
2.	LD Cathode (-), #20 AWG
3.	FAN (+5V), #28 AWG
4.	FAN (-), #28 AWG



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