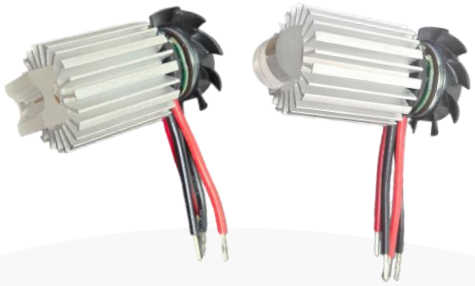
High Power Laser Diode
Laser Engine-Q Package

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.

High Power Laser Diode
Laser Engine-Q Package

Specification

LEQ-122

Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1450	nm (±20)
Output Power (CW)*	P_{out}	2	watts (±10%)
Spectral Width	$\delta\lambda$	10	nm 3dB
X-Axis Divergence* with matched lens	Θ_X	28	deg FMHW
Y -Axis Divergence* with matched lens	Θ_Y	28	deg FWHM
X-Axis Divergence* with FAC lens	Θ_X	10	deg FMHW
Y -Axis Divergence* with FAC lens	Θ_Y	2	deg FWHM
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	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	°C
Storage Temp.		-40 to 85	°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.

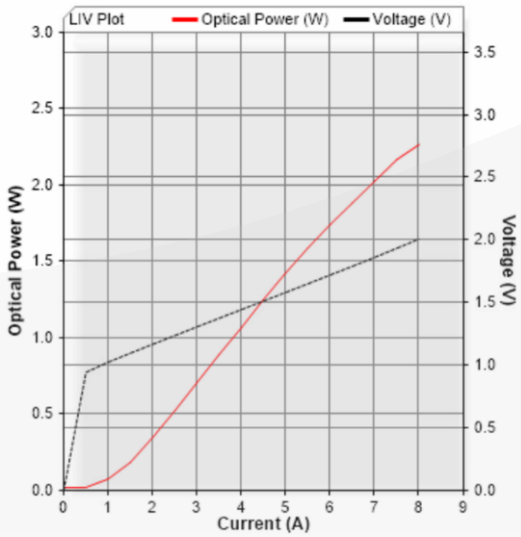
*Available Lenses & Caps

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

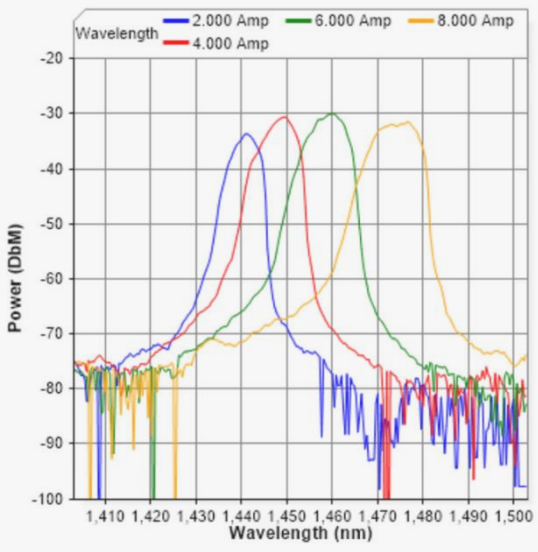
SemiNex Laser Diodes LEQ-122

Graphs & Data

Typical LEQ L-I-V Characteristics



Typical LEQ Output Spectrum



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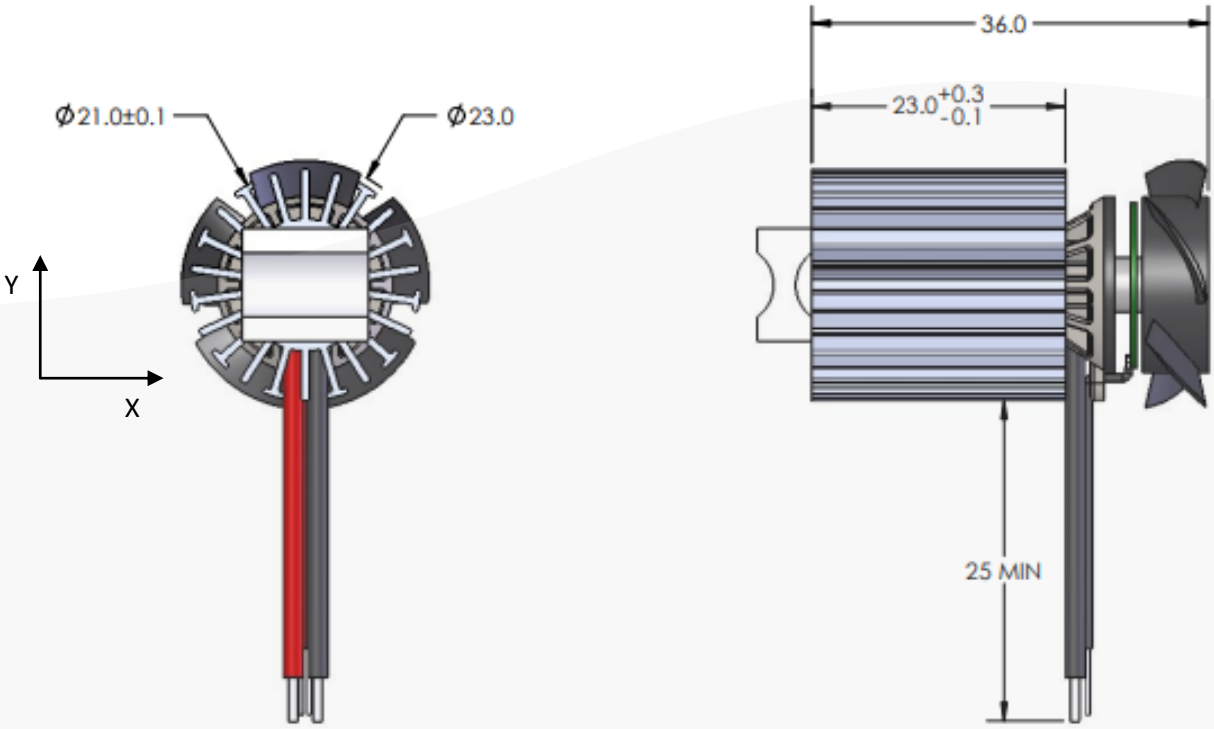
High Power Laser Diode
Laser Engine-Q Package

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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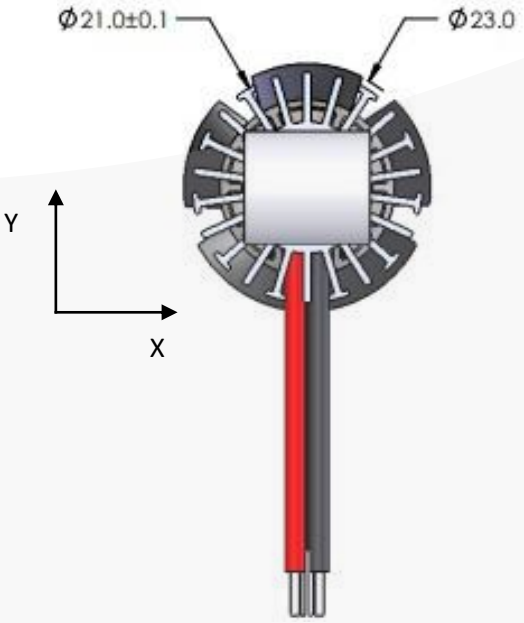
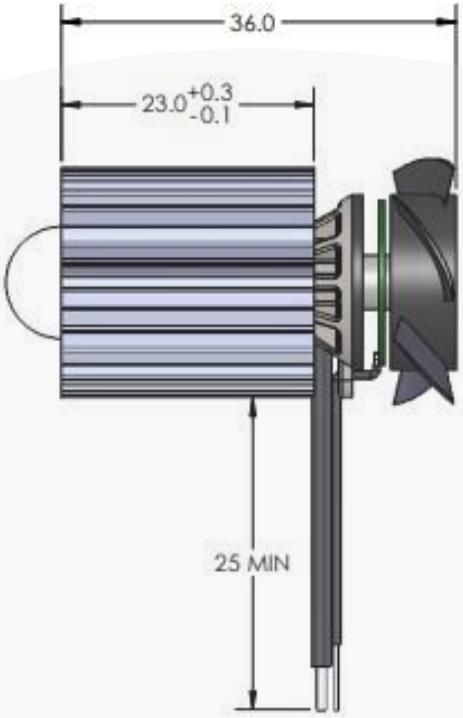
High Power Laser Diode
Laser Engine-Q Package

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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