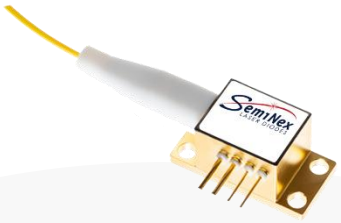
High Power Laser Diode TO-Cans

Part Number: 4PN-101



High Power 4-Pin Fiber Coupled Module
Multi-Mode Fabry-Perot Laser Diode
CW Wavelength at 1460nm

Features

- High Output Power
- High Dynamic Range
- High Efficiency
- 4-Pin Fiber Coupled Module
- Cost Effective
- PD or Thermistor Options Available

Application

- Professional Medical
- Laser Range Finder
- Target Illumination
- 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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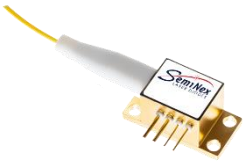
Specification

4PN–101



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1460	nm (±20)
Output Power (CW)*	P_{out}	4	watts (±10%)
Spectral Width FWHM	$\Delta\lambda$	10	nm
Slope Efficiency	η	0.38	W/A
Optical Fiber Core Dia.		105	µm
Optical Fiber NA		0.22	
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	21	%
Operating Current	I_{op}	12	A
Threshold Current	I_{TH}	0.5	A
Operating Voltage	V_{op}	1.6	V
Mechanical	**Symbol**		**Units**
Fiber Length		1.5	meters
Connector Type		SMA905	
Thermistor			
Thermistor Constant		3477	β
Thermistor Resistance		10	K ohm
		Range	
Operating Temp.**		-40 to 60	°C
Storage Temp.		-40 to 80	°C

PLEASE NOTE: The 4 Pin laser package is not electrically isolated.
The package body is the anode connection. Care should be taken in mounting and installation.
*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.

WARNING - FIBER HANDLING
- Do NOT bend the fiber tighter than 26 mm radius during installation or handling.
- Do NOT bend the fiber tighter than 52 mm radius during normal operation or long-term use
- Exceeding these limits may cause permanent fiber damage and increased optical loss

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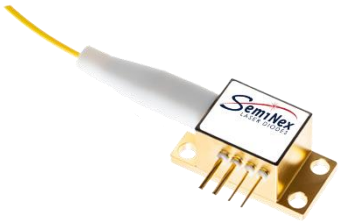
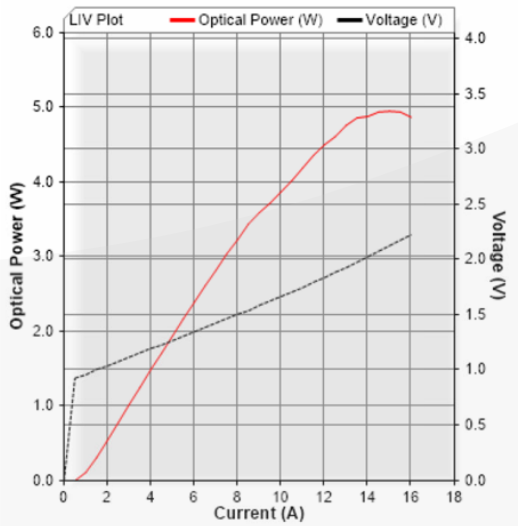
SemiNex Laser Diodes 4PN-101

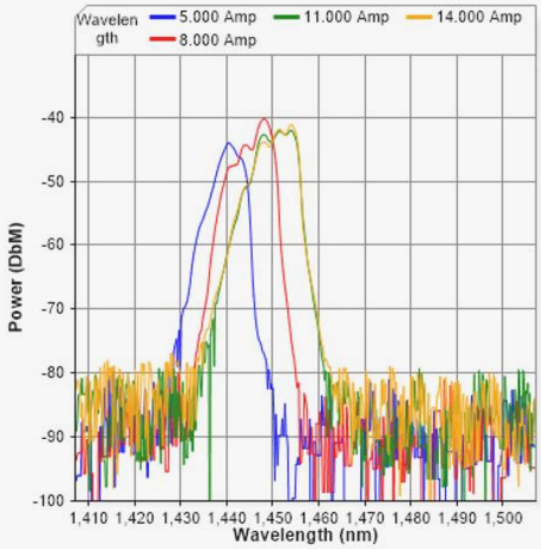


Graphs & Data

Typical 4PN L-I-V Characteristics



Typical 4PN Output Spectrum



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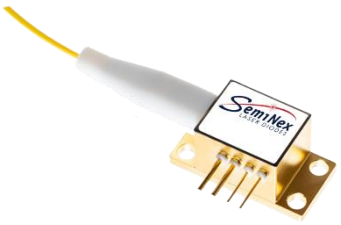
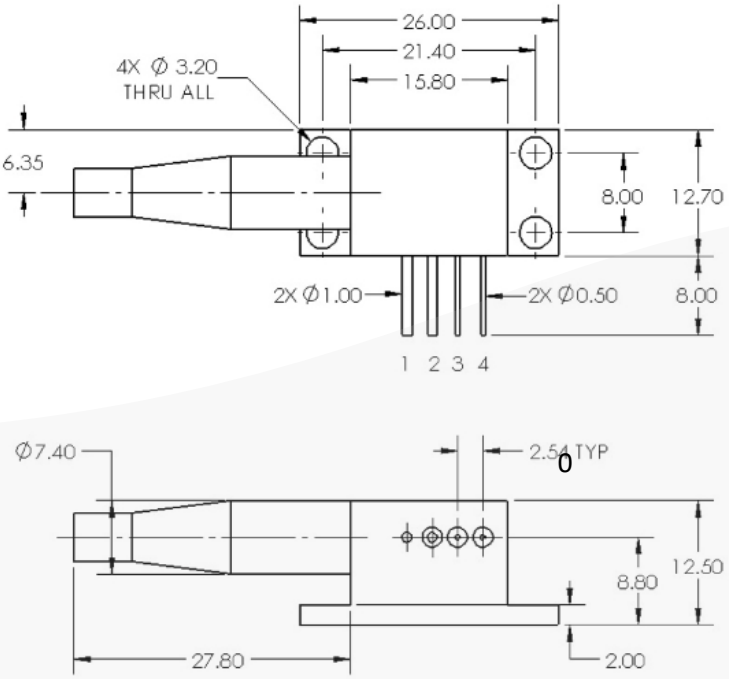
Mechanical Drawing





Pins	Function
1	LD Anode (+)
2	LD Cathode (-)
3	PD (-) or Thermistor
4	PD (+) or Thermistor

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