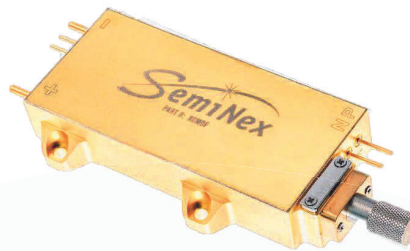


High Power Laser Diode XCMDF Detachable Fiber



Part Number: XCMDF-101

High Power XCMDF Detachable Fiber Module
Multi-Mode Fabry-Perot
CW Wavelength at 1470nm



Features

- 50W 1470nm
- Detachable Fiber
- Cost Effective Fiber Coupled Design
- High Output Power
- High Dynamic Range
- High Efficiency
- PD & Thermistor Included
- Red Aiming Beam Optional

Application

- Professional Medical
- DPSS Pump Source
- 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.

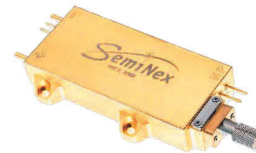
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High Power Laser Diode XCM Detachable Fiber



Specification

XCMDF-101



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1470	nm (± 20)
Output Power (CW)*	P_{out}	50	Watts ($\pm 10\%$)
Spectral Width FWHM	$\Delta\lambda$	10	nm
Slope Efficiency	η	5.4	W/A
Detachable Optical Fiber Core Dia.		400	μm
Optical Fiber NA		0.22	
Electrical	Symbol	Typ.	Units
Power Conversion Eff.	η	24	%
Operating Current	I_{op}	12	A
Threshold Current	I_{TH}	1	A
Operating Voltage	V_{op}	19	V
Optical Fiber (Optional)			Units
Connector Type		SMA	
Detachable Fiber Length		1	meters
Thermistor			
Thermistor Constant	β	3477	β
Thermistor Resistance	R	10	K ohm
Red Aiming Beam			
Output Power	P_a	2	mW
Wavelength	λ_a	635 $\pm$ 10	nm
Voltage	V_a	2.1	V
Current	I_a	175	mA
		Range	
Operating Temp.**		-20 to 60	$^{\circ}C$
Storage Temp.		-40 to 80	$^{\circ}C$

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

Suffix	Description
-004	635nm WL Red Aiming Beam Option

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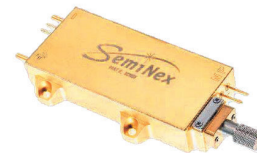
WARNING - FIBER HANDLING

- 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.

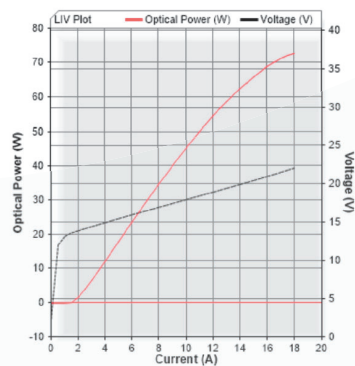
High Power Laser Diode XCM Detachable Fiber



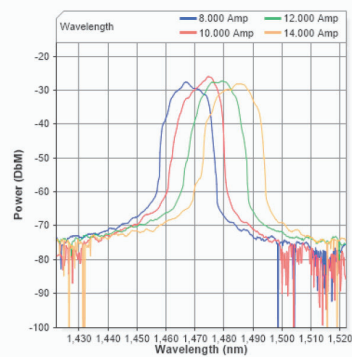
SemiNex Laser Diodes XCMTDF-101 Graphs & Data



Typical XCM L-I-V Characteristics



Typical XCM Output Spectrum

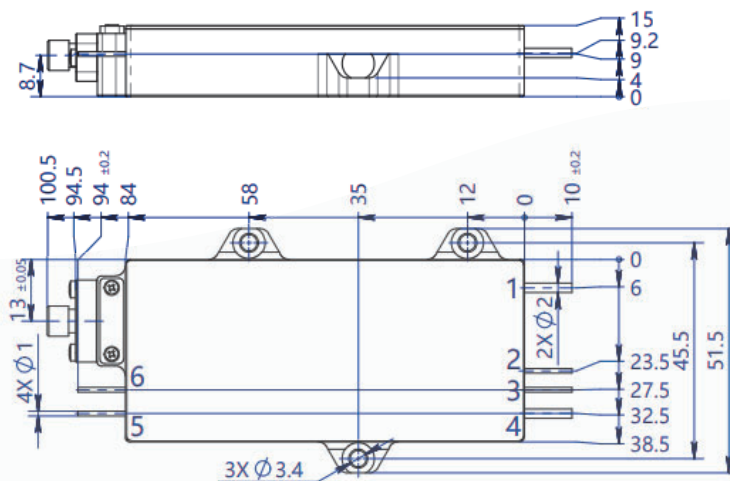


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High Power Laser Diode XCMDF Detachable Fiber



Mechanical Drawing XCMDF-101



Pin	Function
1	LD (+)
2	Thermistor
3	Thermistor
4	LD (-)
5	PD (+)
6	PD (-)

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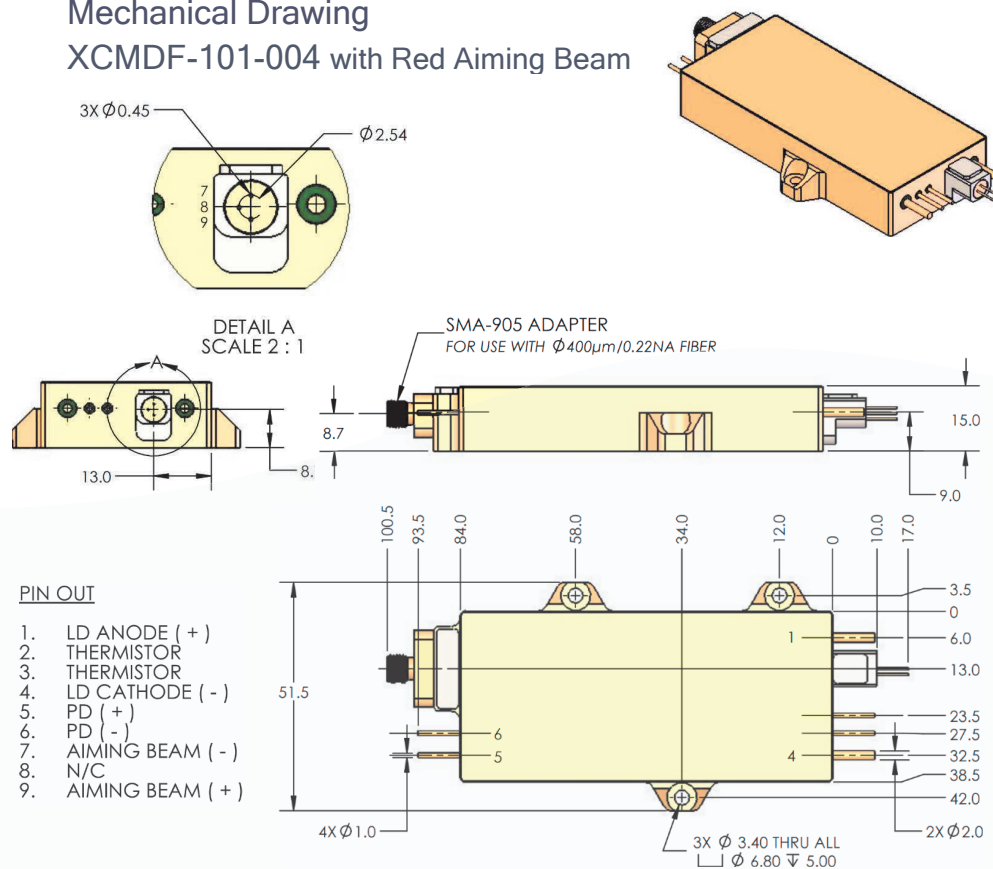


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High Power Laser Diode XCMDF Detachable Fiber



Mechanical Drawing XCMDF-101-004 with Red Aiming Beam



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