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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XCM Detachable Fiber

Specification

XCMDF-101

Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1470	nm (±20)
Output Power (CW)*	P_{out}	50	Watts (±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+/-10	nm
Voltage	V_a	2.1	V
Current	I_a	175	mA
		Range	
Operating Temp.**		-20 to 60	°C
Storage Temp.		-40 to 80	°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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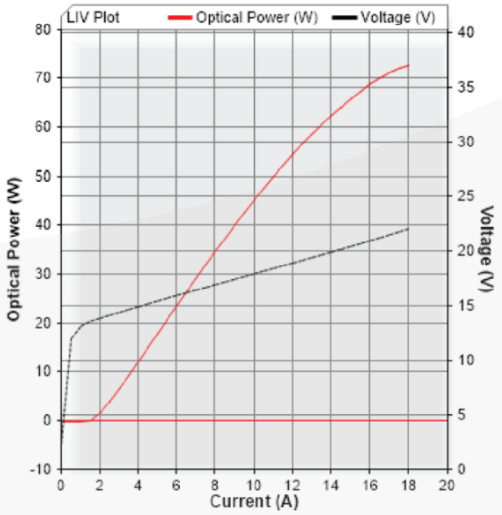
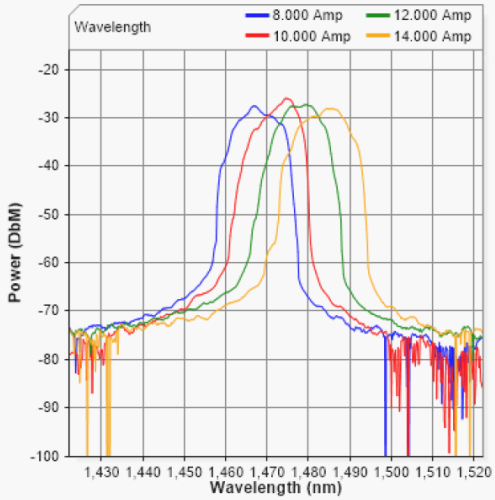
SemiNex Laser Diodes XCMDF-101

Graphs & Data

Typical XCM L-I-V Characteristics

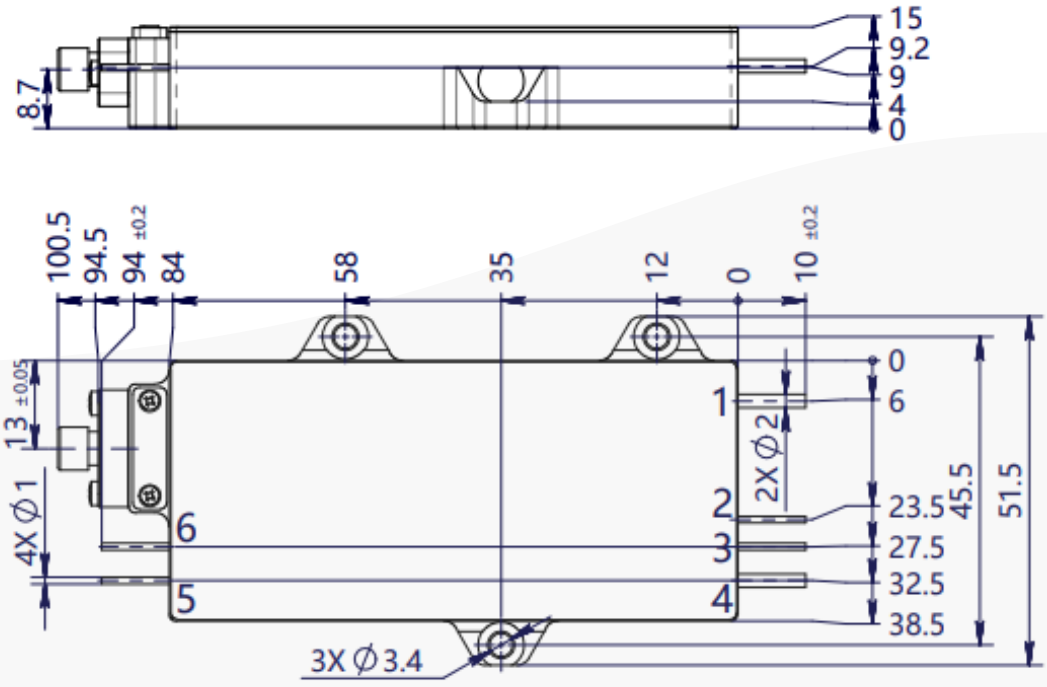


Typical XCM Output Spectrum



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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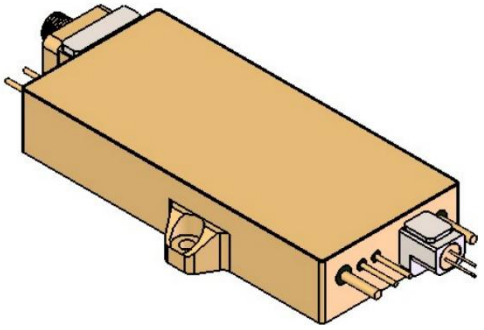
High Power Laser Diode
XCMDF Detachable Fiber

Mechanical Drawing
XCMDF-101-004 with Red Aiming Beam



PIN OUT

1. LD ANODE (+)
2. THERMISTOR
3. THERMISTOR
4. LD CATHODE (-)
5. PD (+)
6. PD (-)
7. AIMING BEAM (-)
8. N/C
9. AIMING BEAM (+)

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