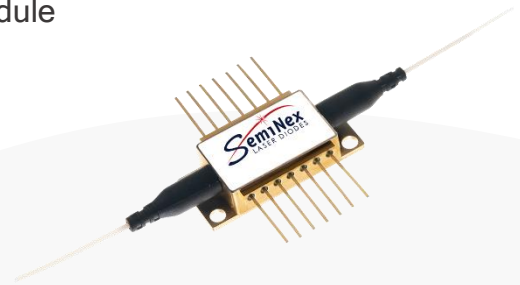


High Power 14-Pin SOA Butterfly Fiber Module



Part Number: 14BF-287 / 14BF-287C

High Power 14-Pin SOA Butterfly Fiber Coupled Module
Single-Mode SOA
Center Wavelength at 1520nm & 1550nm C-band



Features

- High Output Power
- High Efficiency
- Polarization Maintenance Fiber
- Isolator Included before Output Fiber

Application

- LiDAR
- Free Space Communications
- Optical Fiber Communications
- Network Test Equipment



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 14-Pin SOA Butterfly Fiber Module



Specification

14BF-287 / 14BF-287C



Optical	Symbol	14BF-287 (Typ.)	14BF-287C (Typ.)	Units
Center Wavelength	λ_c	1520	1550	nm
3dB Bandwidth	BW	80	80	nm
Output Power @1.2A*	P_{out}	24	24	dBm
PDL	PDL	0.1	0.1	dB
Return Loss (In)		40	40	dB
Return Loss (out)		50	50	dB
Gain @ Pin = 10 μ W	G	30	30	dB
Noise Figure	NF	7	7	dB
Electrical	Symbol			Units
Operating Current	I_{op}	1	1	A
Operating Voltage	V_{op}	2	2	V
Optical Fiber	Symbol			Units
Fiber Core		8	8	μ m
Fiber Package				
Fiber Type		900 μ m jacket	900 μ m jacket	
Connector Type		FC / APC	FC / APC	
Fiber Length		1	1	m
Pinout Type		Type 1	Type 1	
Thermistor & TEC				
Thermistor Constant	β	3930	3930	β
Thermistor Resistance	R	10	10	K ohm
Voltage (TEC) – Typ, Max	V_{TEC}	4.2, 8.2	4.2, 8.2	V
Current (TEC) – Typ, Max	I_{TEC}	0.8, 2.6	0.8, 2.6	A
		Range	Range	
Operating Temp.**		-20 to 75	-20 to 75	$^{\circ}$ C
Storage Temp.		-40 to 85	-40 to 85	$^{\circ}$ C

*Optical Output Power for 14BF-287 has an SOA current @ 1.2A and Pin @ 15dBm into fiber

*Specified values are rated at a constant heat sink temperature of 20 $^{\circ}$ C.

**High temperature operation will reduce performance and MTTF.

Unless otherwise indicated all values are nominal.

Suffix	Description
14BF-287-001	1520nm Short Pulse
14BF-287C-001	1550nm Short Pulse

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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.

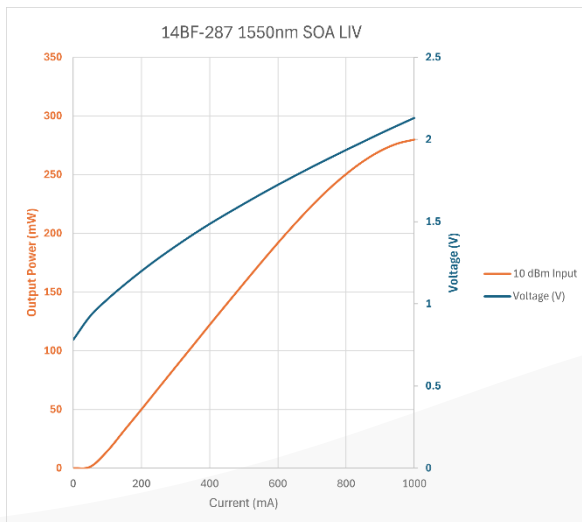
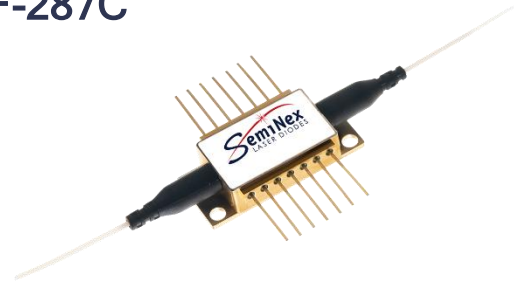
High Power 14-Pin SOA Butterfly Fiber Module



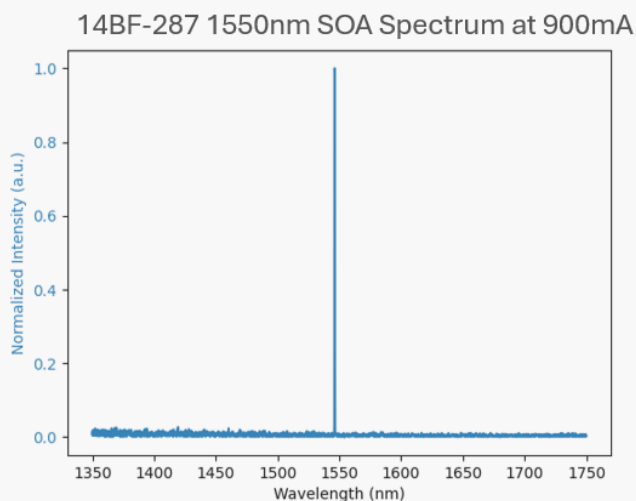
SemiNex Laser Diodes 14BF-287 / 14BF-287C

Graphs & Data

Typical 14BF L-I-V Characteristics



Typical 14BF Output Spectrum

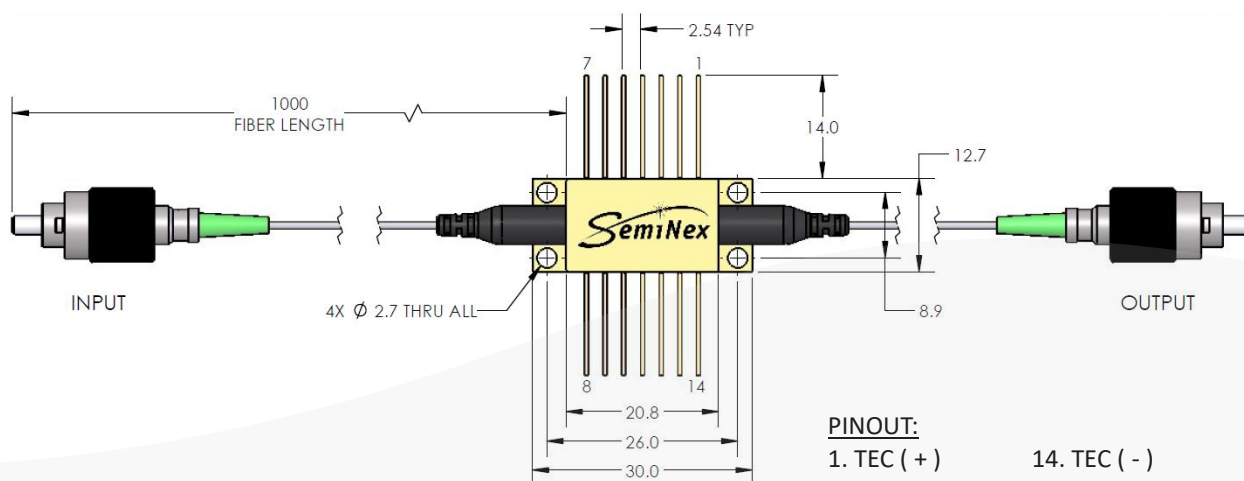
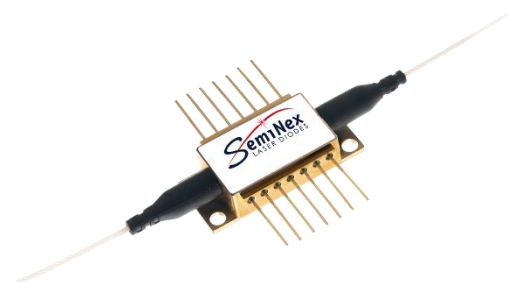


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High Power 14-Pin SOA Butterfly Fiber Module

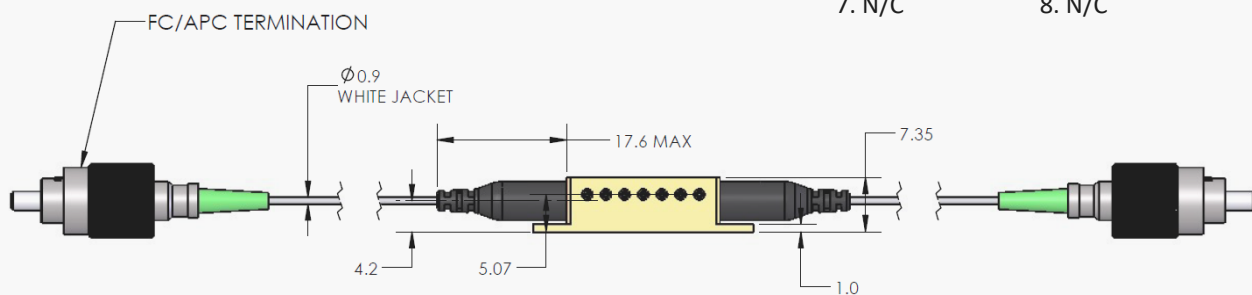


Mechanical Drawing



PINOUT:

- | | |
|---------------|---------------------|
| 1. TEC (+) | 14. TEC (-) |
| 2. THERMISTOR | 13. CASE |
| 3. N/C | 12. N/C |
| 4. N/C | 11. SOA CATHODE (-) |
| 5. THERMISTOR | 10. SOA ANODE (+) |
| 6. N/C | 9. N/C |
| 7. N/C | 8. N/C |



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