

High Power 14-Pin SOA Butterfly Fiber Module

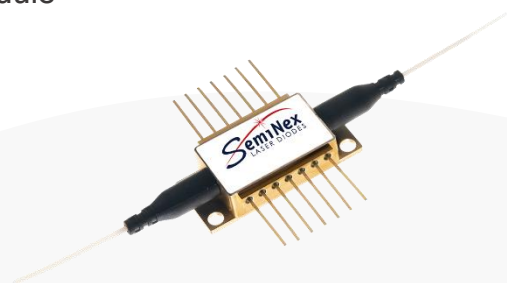


Part Number: 14BF-290 / 14BF-2900

High Power 14-Pin SOA Butterfly Fiber Coupled Module
Single-Mode SOA
Wavelength at 1280nm & 1310 O-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-290 /14BF-2900



Optical	Symbol	Typ.		Units
		14BF-290	14BF-2900	
Center Wavelength	λ_c	1280	1310	nm
3dB Bandwidth	BW	80	80	nm
Output Power @1A*	P_{out}	24.9	24.9	dBm
PDL	PDL	0.4	0.4	dB
Return Loss (In)		45	45	dB
Return Loss (out)		50	50	dB
Gain @ Pin = 10 μ W	G	32	32	dB
Noise Figure	NF	6	6	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				
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-290 has an SOA current @ 1.2A and Pin @ 10dBm 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.

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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.

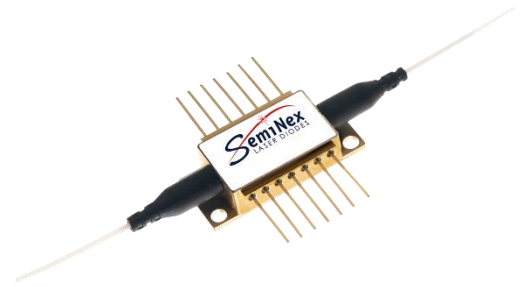
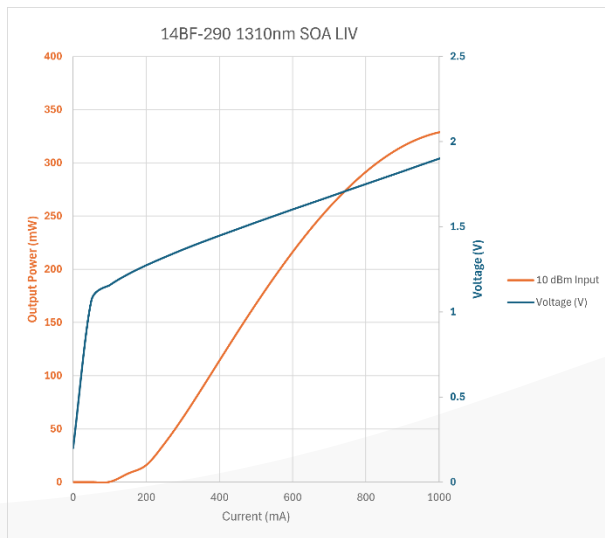
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SemiNex Laser Diodes 14BF-290 / 14BF-290O

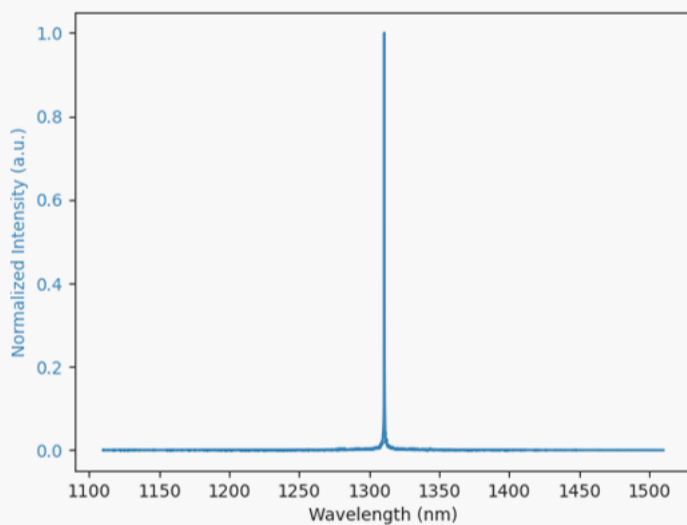
Graphs & Data

Typical 14BF L-I-V Characteristics



Typical 14BF Output Spectrum

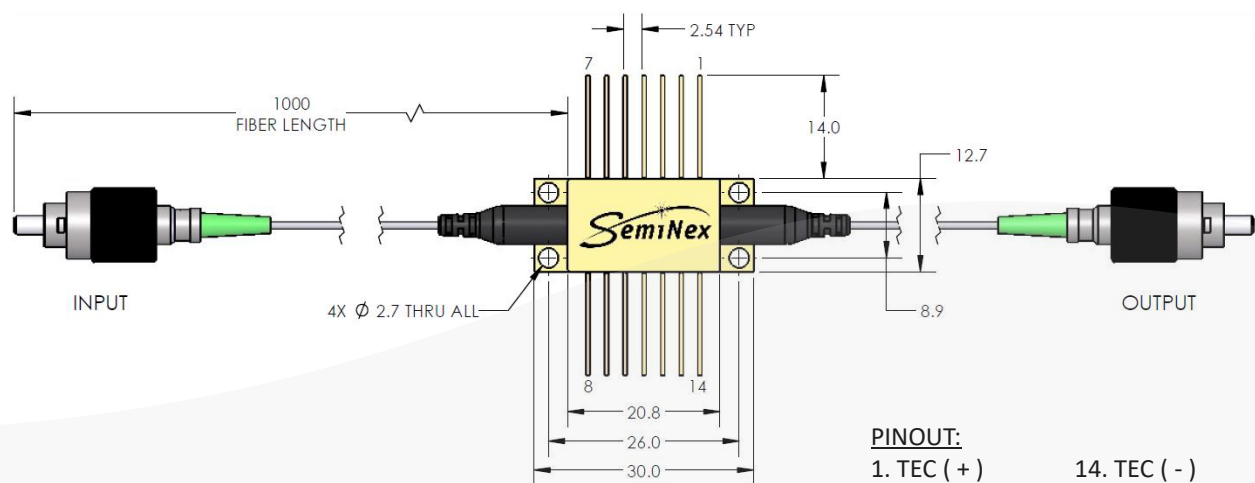
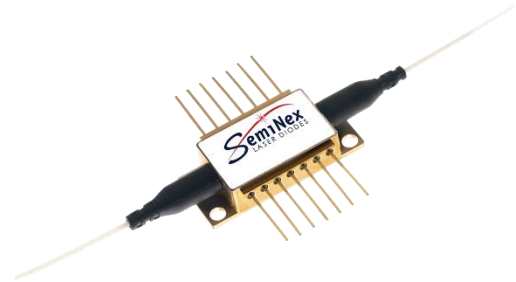
14BF-290 1310nm SOA Spectrum at 500mA



High Power 14-Pin SOA Butterfly Fiber Module

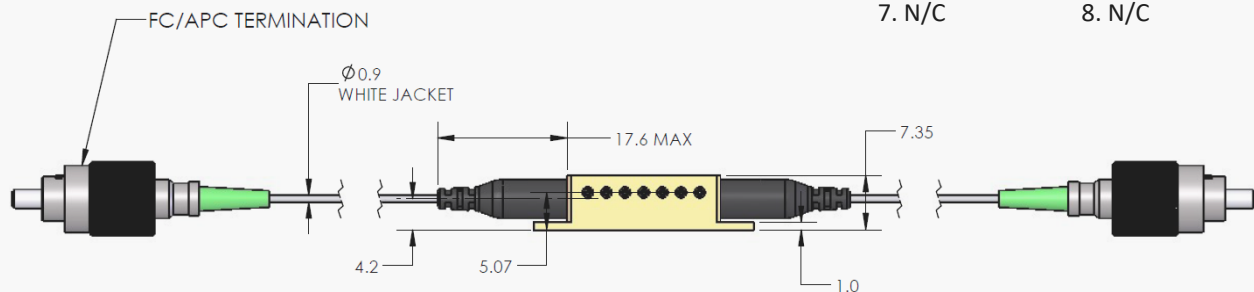


Mechanical Drawing



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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