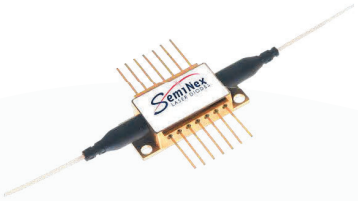
High Power 14-Pin Short Pulse SOA Butterfly Fiber Module

Part Number: 14BF-287-001 / 14BF-287C-001

High Power 14-Pin SOA Butterfly Fiber Coupled Module
Single-Mode Short Pulse SOA
Wavelength at 1550nm, C band



Features

- High Output Power
- High Efficiency
- Polarization Maintenance Fiber
- Isolator Included before Output Fiber
- Short pulse application, rise and fall time @ 1 nsec

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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Specification 14BF-287-001 / 14BF-287C-001

Optical	Symbol	14BF-287-001 (Typ.)	14BF-287C-001 (Typ.)	Units
Center Wavelength	λ_c	1520	1550	nm
Output Power @1.2A*	P_{out}	23.5	23.5	dBm
PDL	PDL	0.1	0.1	dB
Return Loss (In)		40	40	dB
Return Loss (out)		50	50	dB
3dB Bandwidth	BW	80	80	nm
Gain @ Pin = 10µW	G	30	30	dB
Noise Figure	NF	7	7	dB
Rise and Fall Time		1	1	nsec
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	µm
Fiber Type		900µm jacket	900µm 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		
Operating Temp.**		-20 to 75	-20 to 75	°C
Storage Temp.		-40 to 85		°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°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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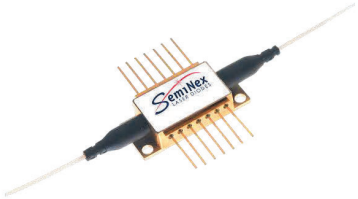
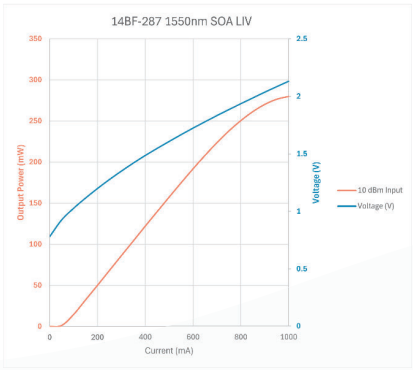
SemiNex Laser Diodes 14BF-287-001 / 14BF-287C-001

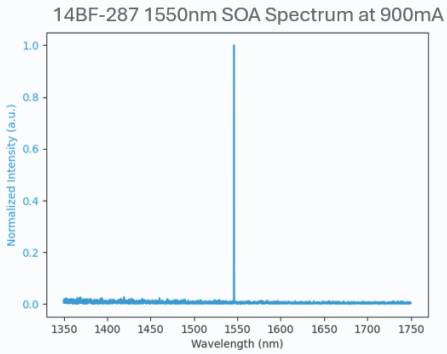
Graphs & Data

Typical 14BF L-I-V Characteristics





Typical 14BF Output Spectrum



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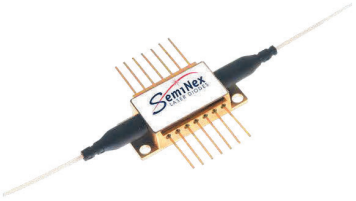
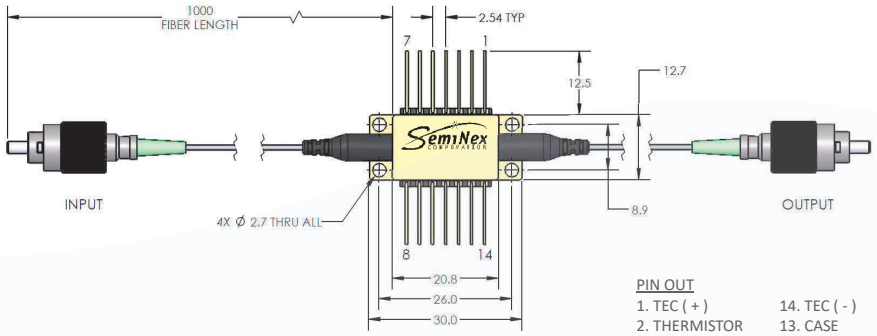
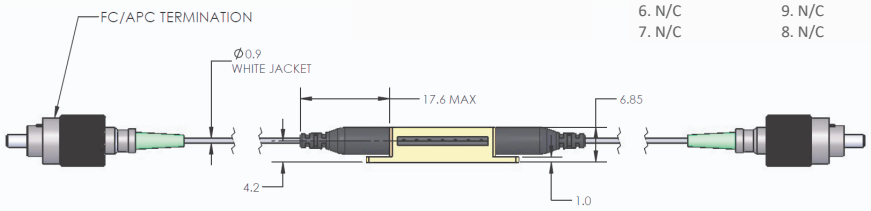
Mechanical Drawing





PIN OUT

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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