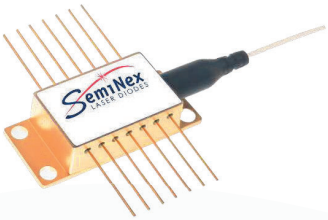
High Power 14-Pin DFB Butterfly Fiber Module

Part Number: 14BF-451



High Power 14-Pin DFB Butterfly Fiber Coupled Module
Single-Mode DFB
Wavelength at 1550nm

Features

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

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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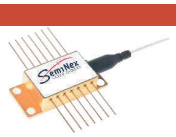
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High Power 14-Pin DFB Butterfly Fiber Module

SemiNex CORPORATION

Specification

14BF-451



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1550	nm (±5 nm)
Output Power	P_{out}	40	mW
Linewidth	Δf	140	kHz
Side Mode Suppression Ratio	SMSR	>50	dB
Relative Intensity Noise	RIN	-150	dBc/Hz
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	9	%
Operating Voltage	V_{op}	1.75	V
Operating Current	I_{op}	500	mA
Threshold Current	I_{TH}	30	mA
Fiber Package	**Symbol**		**Units**
Fiber Core		8	µm
Fiber Type		900µm jacket	
Connector Type		FC / APC	
Fiber Length		1	m
Pinout Type		Type 1	
Thermistor			
Thermistor Constant	β	3930	β
Thermistor Resistance	R	10	K ohm
Voltage (TEC) – Typ, Max	V_{TEC}	2, 8.2	V
Current (TEC) – Typ, Max	I_{TEC}	0.3, 2.6	A
		Range	
Temperature Coefficient		0.11	nm/°C
Operating Temp.**		-20 to 75	°C
Storage Temp.		-40 to 85	°C

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.

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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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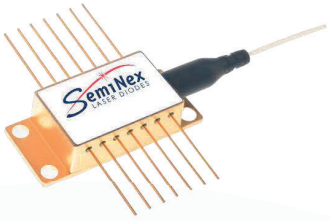
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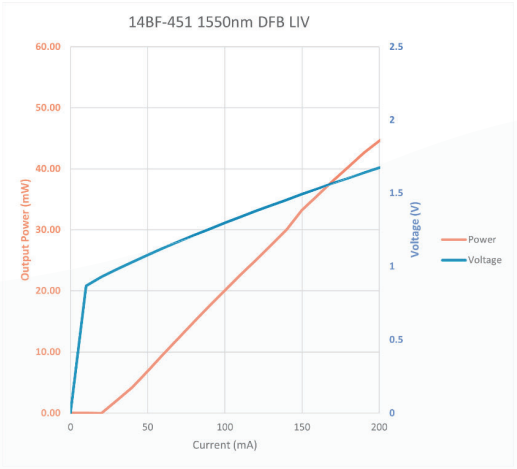
High Power 14-Pin DFB Butterfly Fiber Module

SemiNex DFB Butterfly 14BF-451

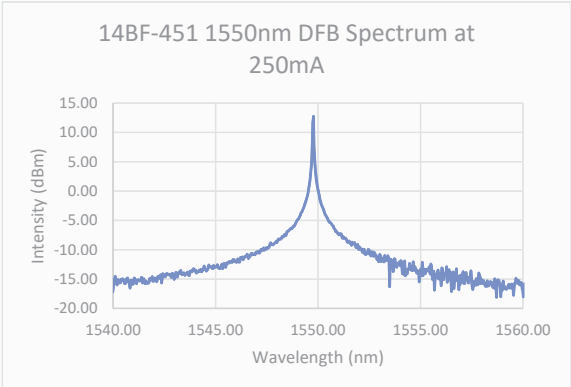
Graphs & Data

Typical DFB Butterfly L-I-V Characteristics





Typical DFB Butterfly Output Spectrum



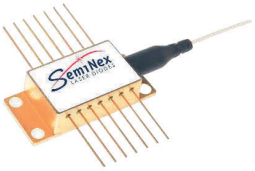
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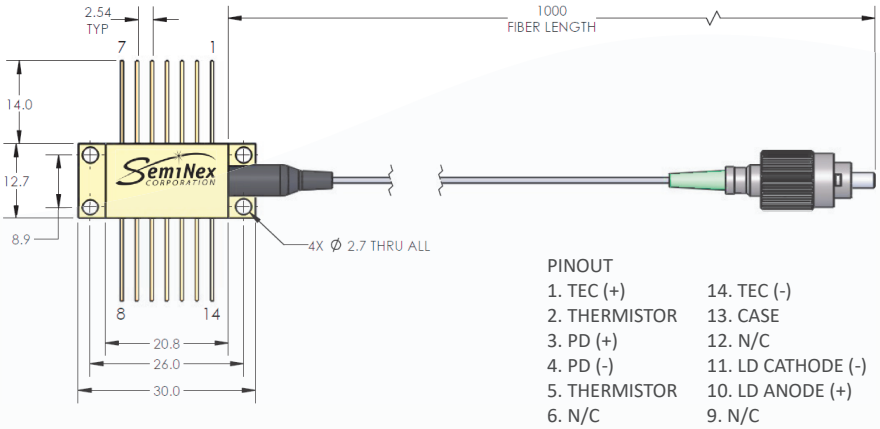
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High Power 14-Pin
DFB Butterfly Fiber Module

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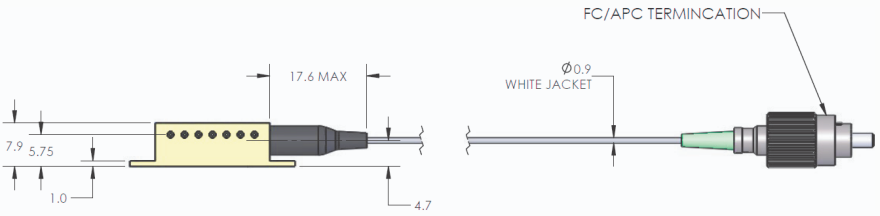


Mechanical Drawing



PINOUT

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



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