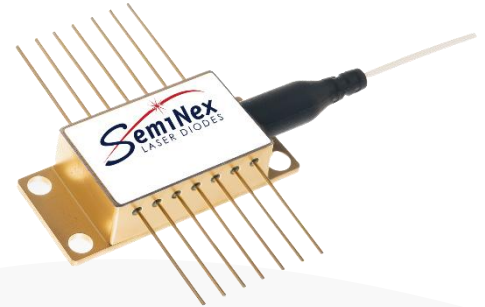


# High Power DFB 14-Pin Butterfly Fiber Module



## Part Number: 14BF-454

High Power 14-Pin DFB Butterfly Fiber Coupled Module  
Single-Mode DFB  
Wavelength at 1311nm



## Features

- High Output Power @ 190mW
- High Efficiency
- Polarization Maintenance Fiber
- Isolator Included

## Application

- Optical Communications
- Optical Networks
- Network Test Equipment
- LiDAR



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.

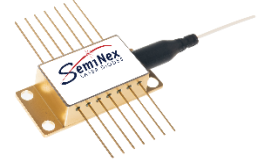
SemiNex Corporation • 153 Andover Street, Suite 201, Danvers, MA 01923 • 978-326-7700 • sales@seminex.com

# High Power 14-Pin DFB Butterfly Fiber Module



## Specification

14BF-454



Optical	Symbol	Typ.	Units
Center Wavelength	$\lambda_c$	1311	nm ( $\pm 5$ nm)
Output Power	$P_{out}$	190	mW
Linewidth @ $I_{op}$	$\Delta f$	<200	kHz
Side Mode Suppression Ratio	SMSR	50	dB
Relative Intensity Noise	RIN	<-140	dBc/Hz
Extinction Ratio (minimum)	ER	20	dB
Electrical	Symbol		Units
Power Conversion Eff.	$\eta$	11	%
Operating Voltage	$V_{op}$	2	V
Operating Current	$I_{op}$	900	mA
Threshold Current	$I_{TH}$	35	mA
Fiber Package	Symbol		Units
Fiber Type	PM 1310nm, 900 $\mu$ m jacket		
Connector Type		FC / APC	
Fiber Length		1	m
Pinout Type		Type 1	
Thermistor			
Thermistor Constant	$\beta$	3930	$\beta$
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		0.1	nm/ $^{\circ}$ C
Operating Temp.**		0 to 50	$^{\circ}$ C
Storage Temp.		-40 to 85	$^{\circ}$ C

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.

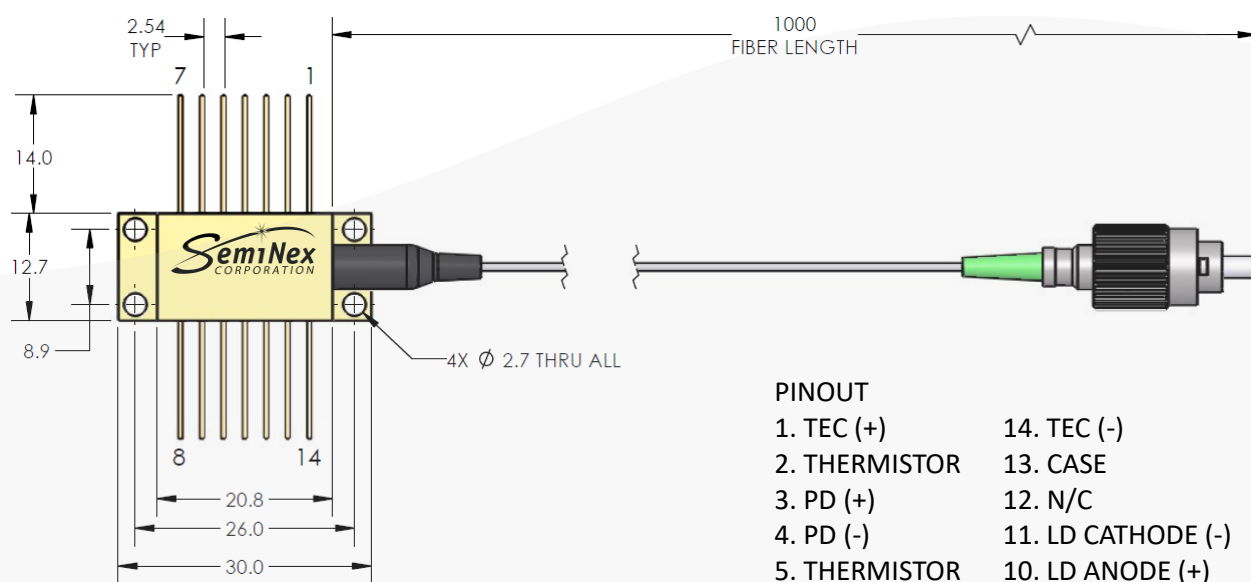
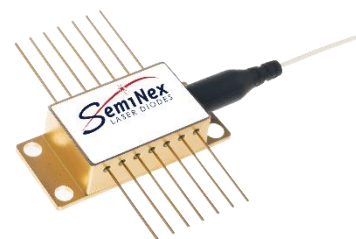
Specified values are rated at a constant heat sink temperature of 20 $^{\circ}$ C.

\*\*High temperature operation will reduce performance and MTTF.

# High Power DFB 14-Pin Butterfly Fiber Module

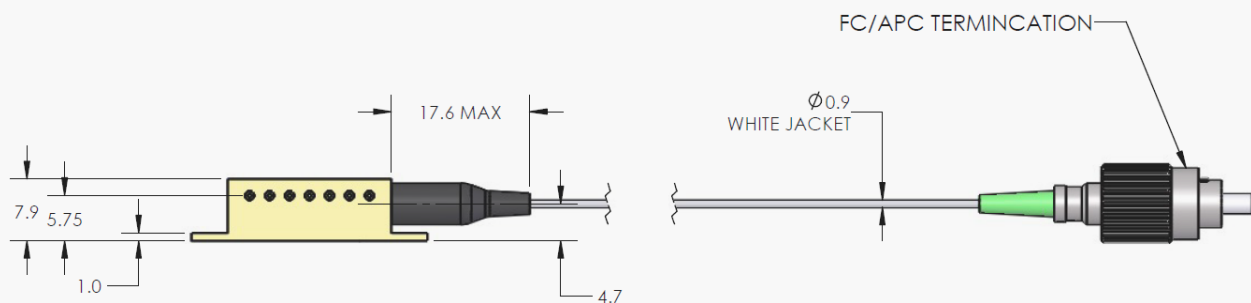


## Mechanical Drawing



**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



All statements, technical information and recommendations related to the product herein are based upon information believed to be reliable or accurate. The accuracy or completeness herein is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. SemiNex Corporation reserves the right to change at any time without notice the design, specification, deduction, fit or form of its described herein, including withdrawal at any time of a product offered for sale herein. Users are encouraged to visit [www.seminex.com](http://www.seminex.com) for the latest data. SemiNex Corporation makes no representations that the products herein are free from any intellectual property claims of others. Please contact SemiNex for more information. 2024 SemiNex Corporation

SemiNex Corporation • 153 Andover Street, Suite 201, Danvers, MA 01923 • 978-326-7700 • [sales@seminex.com](mailto:sales@seminex.com)

