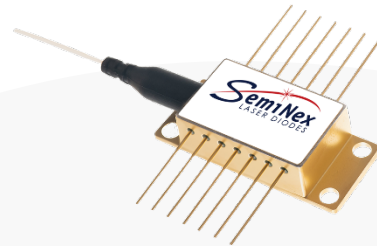


High Power 14-Pin DFB Butterfly Fiber Module



Part Number: 14BF-453

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

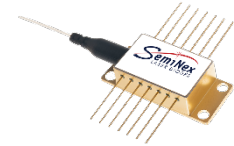
Application

- 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.

High Power 14-Pin DFB Butterfly Fiber Module



Specification

14BF-453

Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1550	nm
Output Power	P_{out}	100	mW
Linewidth	Δf	300	kHz
Side Mode Suppression Ratio	SMSR	55	dB
Relative Intensity Noise	RIN	-150	dBc/Hz
Electrical	Symbol		Units
Power Conversion Eff.	H	20	%
Operating Voltage	V_{op}	1.5	V
Operating Current	I_{op}	500	mA
Threshold Current	I_{TH}	60	mA
Fiber Package	Symbol		Units
Fiber Core		8	μm
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		0.1	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.

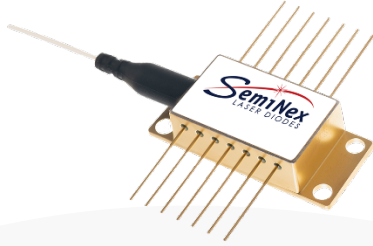
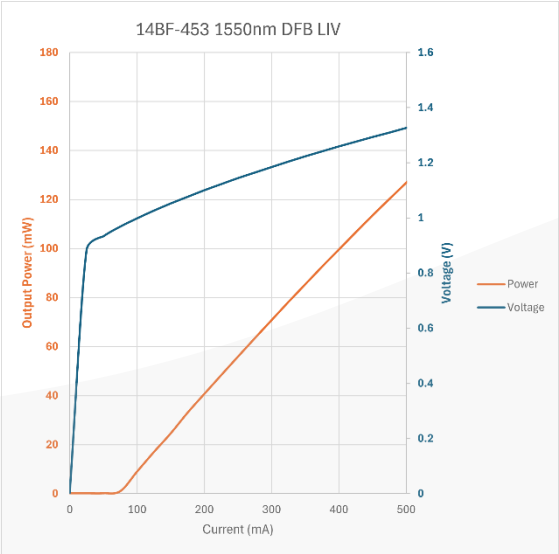
Unless otherwise indicated all values are nominal.

High Power 14-Pin DFB Butterfly Fiber Module



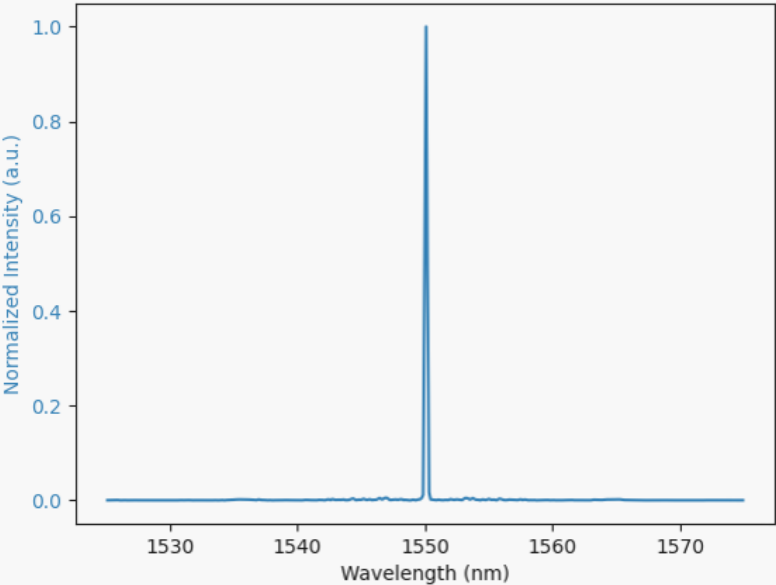
SemiNex DFB Butterfly 14BF-453

Graphs & Data Typical DFB Butterfly L-I-V Characteristics



Typical DFB Butterfly Output Spectrum

14BF-453 1550nm DFB Spectrum at 650mA

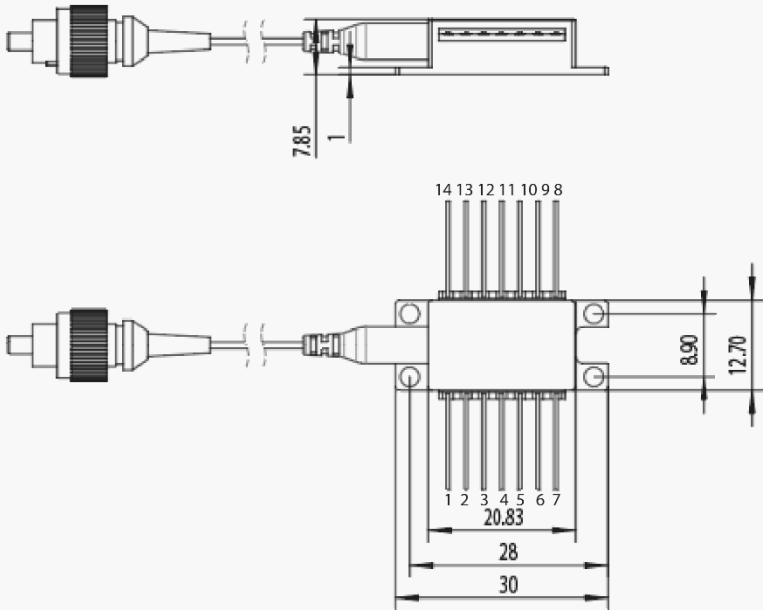
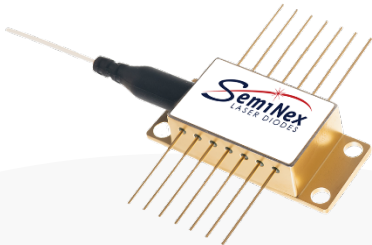


High Power 14-Pin DFB Butterfly Fiber Module



Mechanical Drawing

1	Thermoelectric Cooler (+)
2	Thermistor
3	MPD Anode (+)
4	MPD Cathode (-)
5	Thermistor
6	NC
7	NC
8	NC
9	NC
10	LD Anode (+)
11	LD Cathode (-)
12	NC
13	NC
14	Thermoelectric Cooler (-)



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