

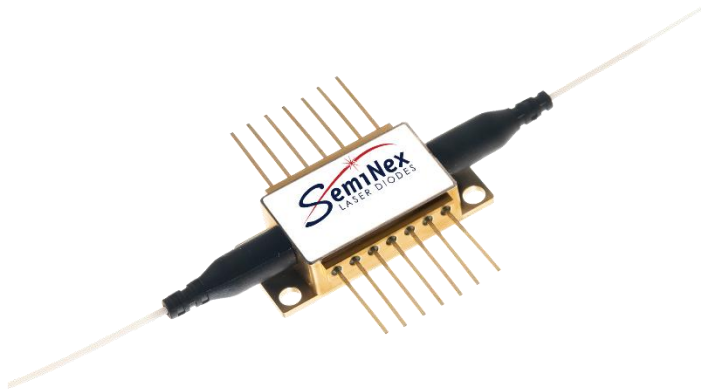


# High Power SOA 14-Pin Butterfly

SemiNex offers High-Power Semiconductor Optical Amplifier (SOA) in 14-Pin Butterfly package. It provides high gain and high performance at cost-effective package for amplifying single mode coherent lasers. Our proprietary epitaxy and SOA waveguide design can achieve high-gain and high-saturation output power for Data Centers and Optical Communications. The 14-Pin Butterfly includes C-band, O-band, and L-Band wavelength ranges.

## Key Benefits

- High saturation output power
- High small signal gain
- Standard SOA butterfly
- Built-in optical isolator
- PM fibers
- Mid-power SOA for pre-amp available
- Short pulse application, rise and fall time @ 1 nsec



## Applications

- Optical Communications
- Data Centers
- Coherent LiDAR



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Optical	Symbol	14BF-290/ 14BF-2900	14BF-287/ 14BF-287C	14BF-287-001/ 14BF-287C-001	14BF-311	14BF-291	14BF-315L	Units
Center Wavelength	$\lambda_c$	1280/1310	1520/1550	1520/1550	1310	1550	1595	nm
Output Power @1A	$P_{out}$	23	23	23	17	17	23	dBm
Return Loss (In)		40	40	40	38	38	40	dB
Return Loss (out)		50	50	50	50	50	50	dB
3dB Bandwidth	BW	80	80	80	80	80	80	nm
Gain @ Pin = 10 $\mu$ W	G	32	30	30	15	15	30	dB
Noise Figure	NF	6	6	6	5	5	6	dB
Rise and Fall Time		-	-	1	-	-	-	nsec
Electrical	Symbol							Units
Operating Current	$I_{op}$	1	1	1	0.5	0.5	1	A
Operating Voltage	$V_{op}$	2.2	2.2	2.2	2.2	2.2	2.2	V
Optical Fiber	Symbol							Units
Fiber Core		8						$\mu$ m
Fiber Type		900 $\mu$ m jacket						
Connector Type		FC / APC						
Fiber Length		1						m
Pinout Type		Type 1						
Thermistor								
Thermistor Constant	$\beta$	3950						$\beta$
Thermistor Resistance	R	10						K ohm
Voltage (TEC) – Typ, Max	$V_{TEC}$	4.2, 8.2	4.2, 8.2	4.2, 8.2	2.0, 8.2	2.0, 8.2	4.2, 8.2	V
Current (TEC) – Typ, Max	$I_{TEC}$	0.8, 2.6	0.8, 2.6	0.8, 2.6	0.5, 2.6	0.5, 2.6	0.8, 2.6	A
		Range	Range	Range	Range	Range		
Operating Temp.**		-20 to 75						$^{\circ}$ C
Storage Temp.		-40 to 85						$^{\circ}$ C

\*Optical Output Power for butterflies have an SOA current @ 1A 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.

