

SZK Series Erbium/Ytterbium Doped Fiber Amplifiers

Erbium-Doped Optical Fiber Amplifier							
Pack	Type	Wavelength	Output Power/Gain		Pigtail Type	Pigtail Length	Customized
M:module	(PM) D EDFA	980(nm)	0~37(dBm)	10~30(dB)	LC/UPC	1m	
D:Benchtop	(PM) C EDFA	1064(nm)	Customized	Customized	LC/APC	1.5m	
C: Customized	(PM) P EDFA	1310(nm)			FC/UPC	2m	
	(PM) YEDFA	1550(nm)			FC/APC	Customized	
	(PM) B EDFA	C Band			SC/UPC		
	RA	L Band			SC/APC		
		C+L Band			Bare fiber		
		Customized			Customized		
Remark: DWDM EDFA = D EDFA CATV EDFA = C EDFA Pulse EDFA = P EDFA Bidirectional EDFA = B EDFA Raman Amplifier = RA							

- High Power Erbium-ytterbium Co-doped Optical Amplifier
- ASE Source Used by Fiber Optic Gyroscope
- Multi-channels Erbium-Doped Optical Amplifier
- Polarization Maintaining Erbium-Doped Optical Amplifier
- Pulse Erbium-Doped Optical Amplifier
- Single Channel Erbium-Doped Optical Amplifier
- C+L Band Erbium-Doped Optical Amplifier
- Ultra-narrow Linewidth Laser

1. High Power Erbium-ytterbium Co-doped Optical Amplifier

Our high power EYDFA product has been widely used in CATV system and FTTH. High Power EYDFA uses single mode laser and multi-mode pump laser to provide energy. The max high output power can reach up to 40dBm. The product can be configured in ACC or APC work mode through GUI. Using the high reliable temperature-controlling technology make the products have excellent thermal performance under wide temperature range.

Product Feature

- High power output
- APC/ACC operation mode
- High stability and reliability
- Customizable

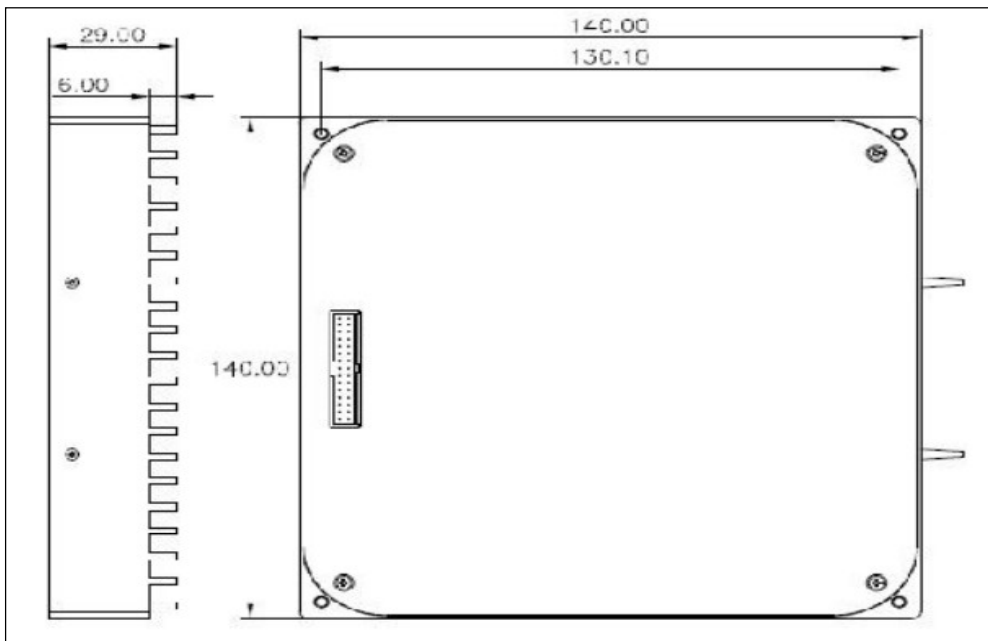
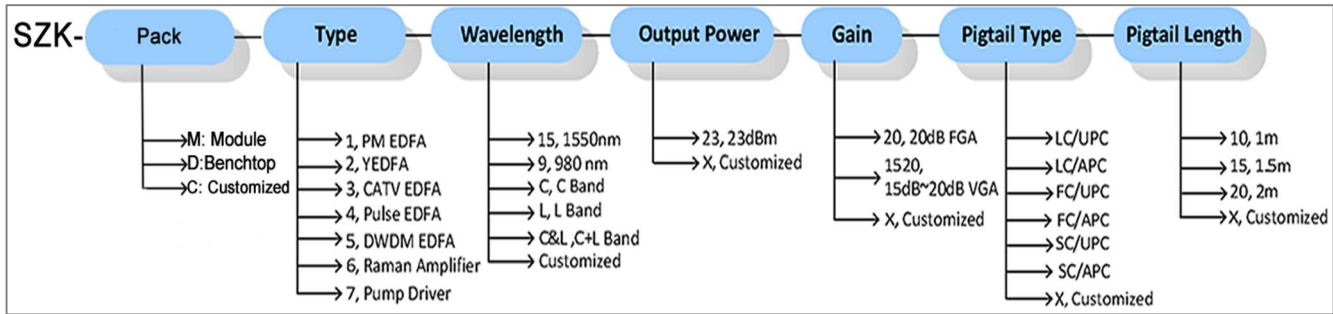
Main Application

- CATV
- FTTH
- Doppler laser radar system (PM YEDFA)
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm	1540	1550	1565
Output port number		1		8
Input power	dBm	-3		10
Output power	dBm	13	33	36
Output power/channel	dBm	13	23	26
Noise Figure	dB		5.5	6

Operation temperature	°C	0	40
Storage temperature	°C	-40	85
Supply voltage	V	5 or 12	
Power consumption	W	60	120
Pigtail Length	cm	50±2	
Pigtail type		FC/APC, 900um	

Order Information:



2. ASE Source Used by Fiber Optic Gyroscope

The ASE light source modules used by fiber optic gyroscope (I-FOG) are designed specifically for the high property fiber optic gyroscope. According to different structure requirements of fiber optic gyro, the ASE light source designed by us has two types that are circular and rectangular, which can satisfy different needs of different structure designs of gyroscope. This type of ASE light source adopts the way of optimizing the optical structure, spectral filtering and power controlling, which plays an important part in improving the stability of fiber optic gyroscope scale factor and the stability of full temperature. In order to satisfy the requirements under different environment conditions, the light source has strict assessment in the range of -40~70°C and the optical path devices and the circuit devices from devices to modules are all under strict selections. Besides, the interior of the light source adopts integrated precise thermal profile, which not only guarantees the spectrum stabilization of light source, but also reduces the whole consumption of light source.

Product Feature

- Meeting GJB150 criterion
- Operation temperature range:-40~70°C
- High stability and reliability

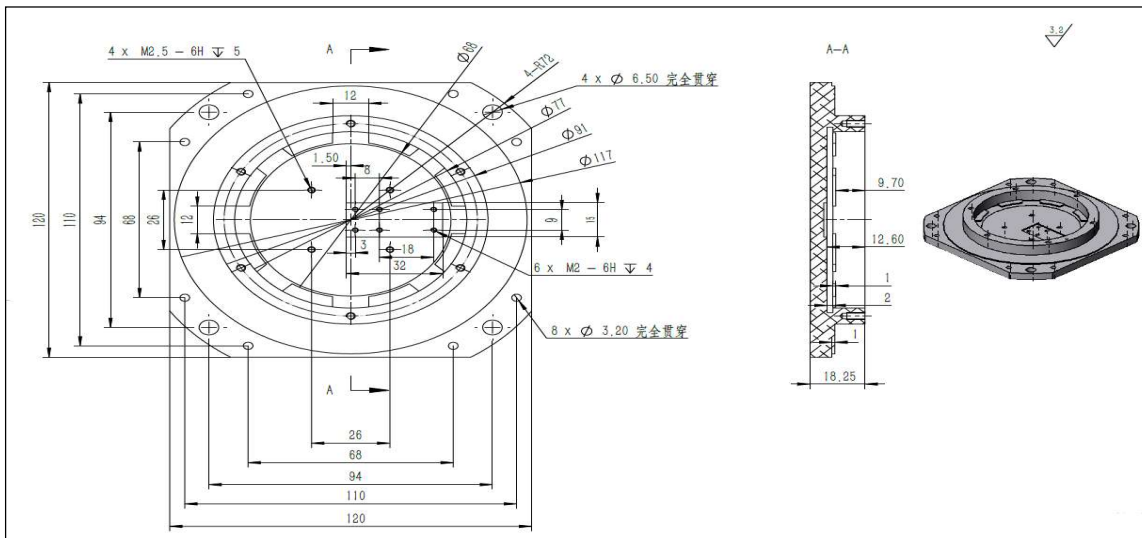
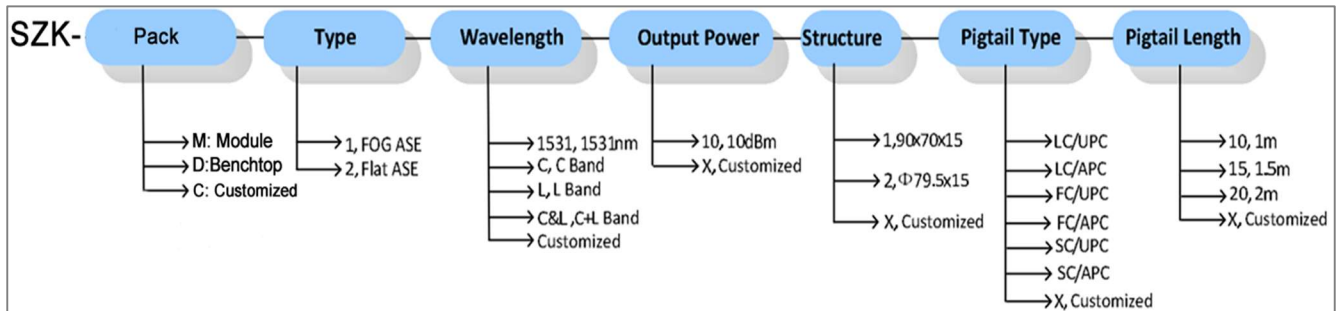
- Customizable

Main Application

- Fiber optic gyroscope
- Military researches
- Medical and biological imaging
- College and research institute

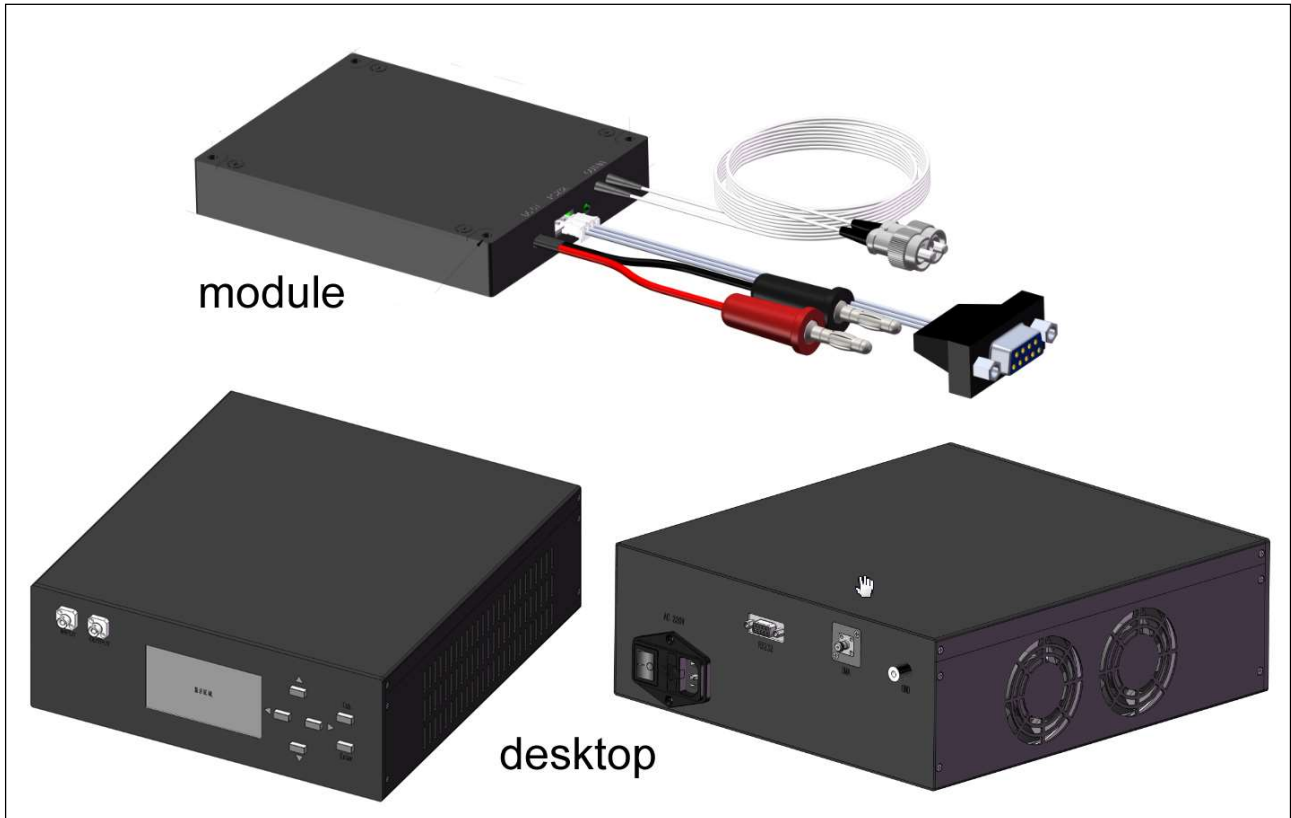
Parameter	Unit	Min	Type	Max
Average wavelength	nm	1558	1560	1562
Bandwidth	nm	≥11nm		
Output optical power	mW	5	-	-
The stability of output optical power @ normal temperature	%	-	-	1%
The stability of output optical power @ full temperature	%	-	-	10%
The stability of wavelength @full temperature	ppm	-	-	150
Modulation depth	dB			0.1
Polarization ratio	dB			0.2
Operation temperature	°C	-40		70
Storage temperature	°C	-55		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			3.5
Pigtail Length	cm	50±2		
Pigtail type		Single mode, 80um		

Order Information:



3. Multi-channels Erbium-Doped Optical Amplifier

Our multi-channels EDFA can be used in the fields of optic fiber communication and optic fiber sensing. EDFA uses 980nm or 1480nm pump laser to provide energy. It can provide EDFA products of C wave band, L wave band and C+L wave band, and its interior uses AGC, ACC or APC as the control system. This product supports cooling pump and un-cooling pump, thus it can rationally match structure size, power dissipation and property to meet different needs of customers. Multi-channel EDFA uses DC+5V/GND input power and flexible form of man-machine interface which facilitates setting up the internal parameters of EDFA through RS232 serial port. Besides, it can realize the parameters real-time monitoring in the module and line remote management and control.



Product Feature

- Up to 20dBm output power
- AGC/APC/ACC operation mode
- Low noise figure and power consumption
- High stability and reliability
- Customizable

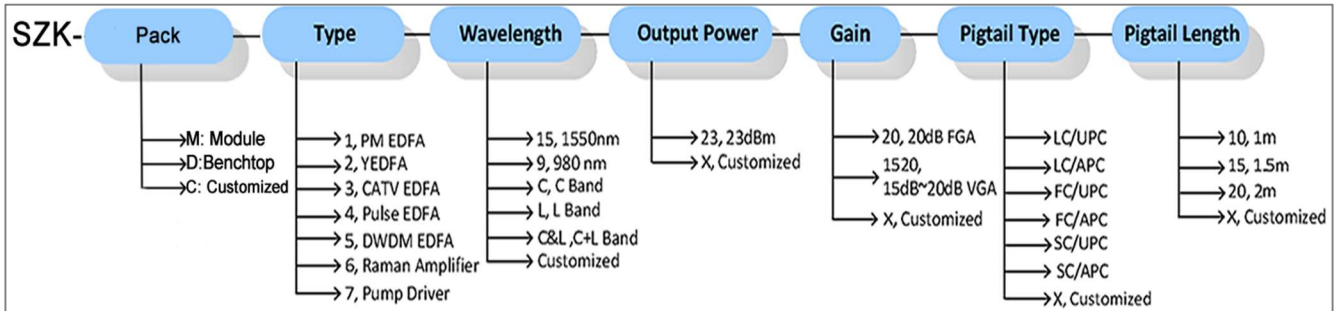
Main Application

- DWDM communication system
- Roadm system
- Fiber sensing transmission system
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm	1528		1563
Channels Number		1		88
Gain	dB	22	25	28
Input power	dBm	-35		-5
Output power	dBm		17	17
Gain Flatness	dB		1	1.5

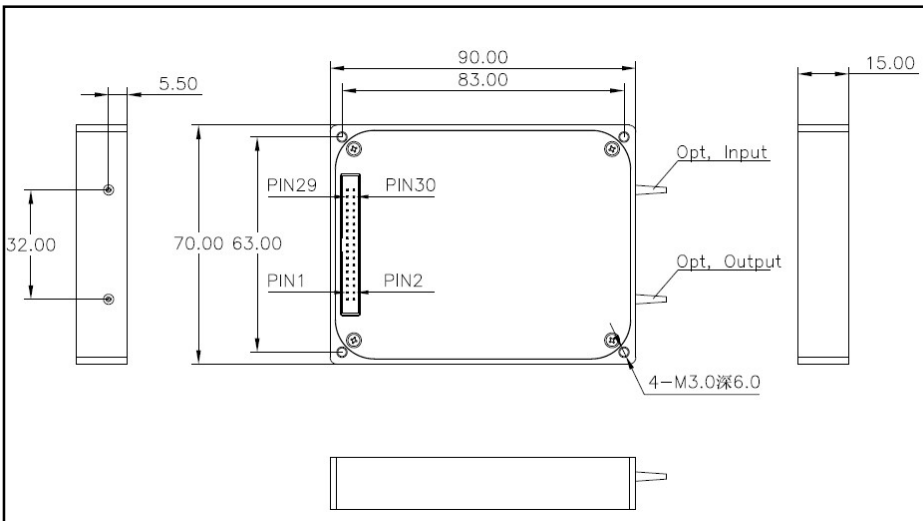
Noise Figure	dB		5.5	6
Adjusted VOA	dB	0		15
Operation temperature	°C	-5		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			20
Pigtail Length	cm	100±2		
Pigtail type		LC/UPC		
Dimension	mm	Module: 90x70x15, desktop: 300x280x100		

Order Information:



Communication protocol

- Baud rate 9600, data bit 8, stop bit 1, calibration bit none
- RO=only read
- RW= read or write



4. Polarization Maintaining Erbium-Doped Optical Amplifier

PM EDFA product has been widely used in the fields of optic fiber sensing and optic fiber communication. PM EDFA uses 980nm pump laser to provide energy. With all polarization maintaining passive components, it has a high output extinction ratio. The product can be configured in AGC, APC or ACC work mode through GUI. Using the high reliability temperature-controlling technology make the products have excellent thermal performance under wide temperature range.

Product Feature

- Up to 23dBm output power
- AGC/APC/ACC operation mode
- Low noise figure and power consumption
- High stability and reliability



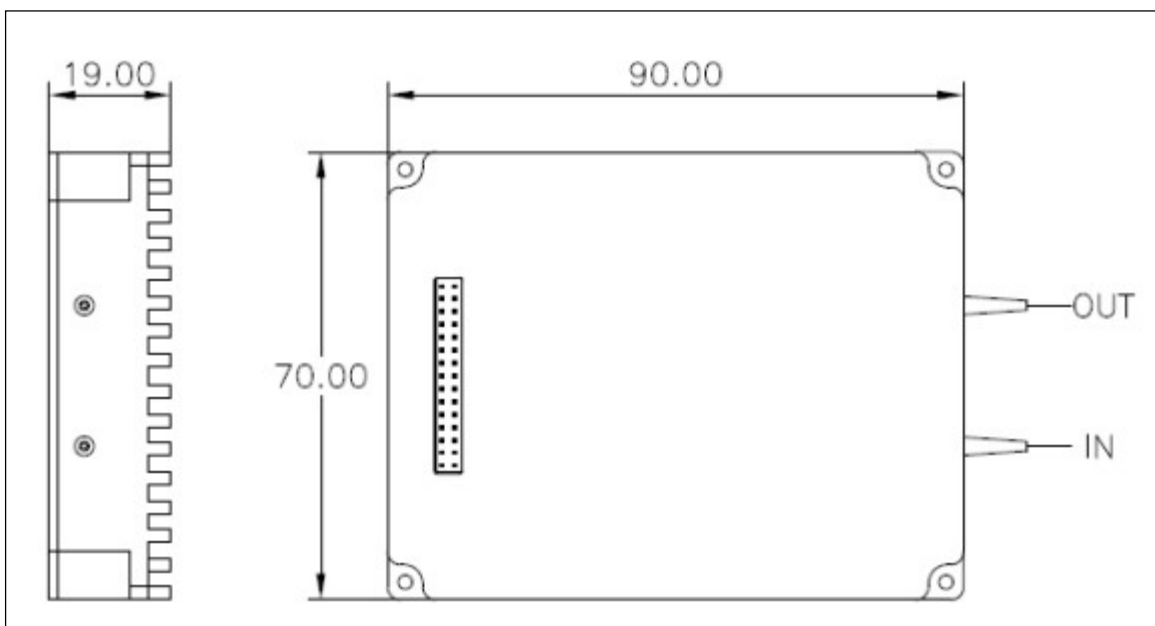
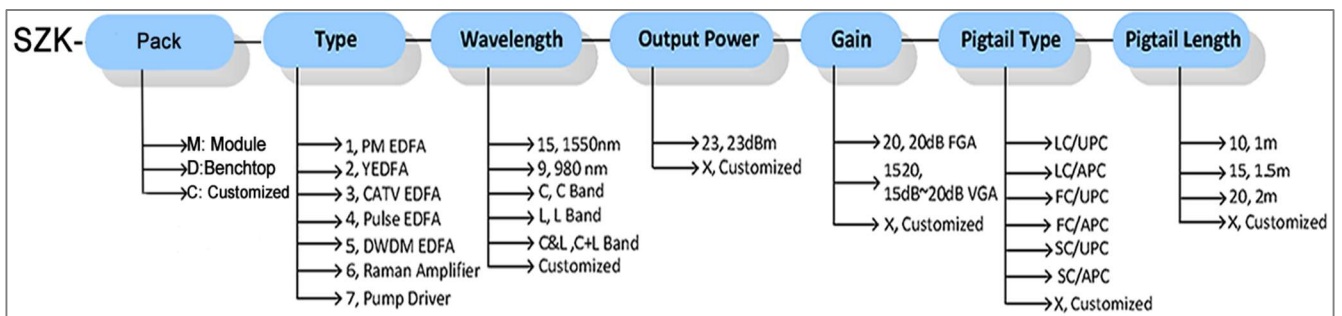
- Customizable

Main Application

- Optical fiber sensing
- PM optical communication system
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm		1550.12	
Bandwidth	G		100	
Input power	dBm	-16		-10
Output power	dBm	22.5	23	23.5
Extinction ratio	dB	20		
Noise Figure	dB		5.5	6
Operation temperature	°C	0		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			20
Pigtail Length	cm	100±2		
Pigtail type		FC/APC, 900um PM		

Order information:



5. Pulse Erbium-Doped Optical Amplifier

Our pulse EDFA product has been widely used in the fields of optic fiber sensing, test wind LIDAR, Hydrophone system. This product can keep intact waveform during amplifying the optical signal. The product can be configured in AGC, APC or ACC work mode through GUI. Using the high reliability temperature-controlling technology make the products have excellent thermal performance under wide temperature range.

Product Feature

- Keep the intact waveform
- AGC/APC/ACC operation mode
- Low noise figure and power consumption
- High stability and reliability
- Customizable

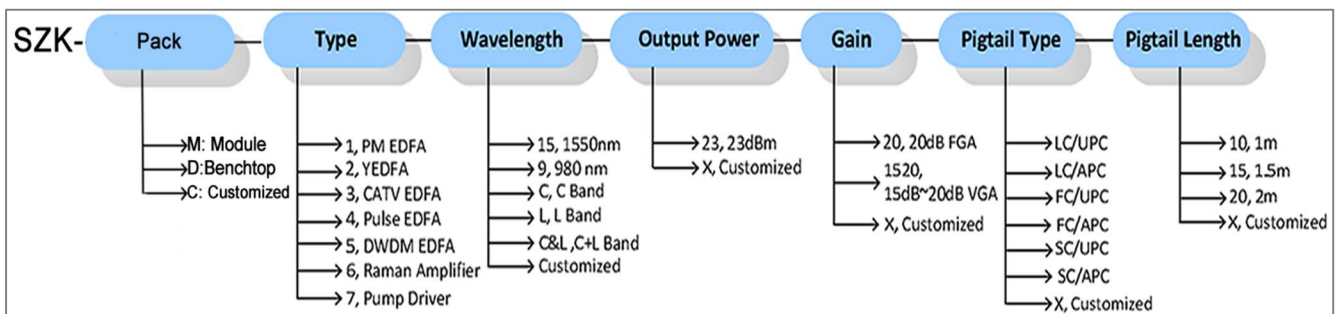
Main Application

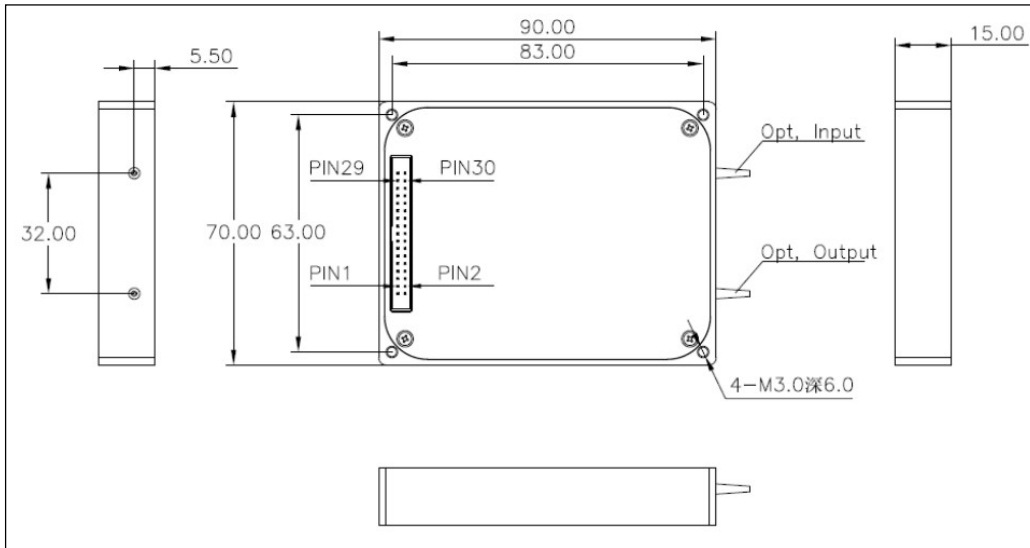
- Optical fiber sensing
- Test wind LIDAR
- Hydrophone system
- College and research institute



Parameter	Unit	Min	Type	Max
Wavelength	nm		1550.12	
Pulse width	ns	1	100	1000
Repetition frequency	Hz	1	200K	
Input average power	dBm	-35		-10
Output average power	dBm		0	
Noise Figure	dB		5.5	6
Operation temperature	°C	-40		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			12
Pigtail Length	cm	100±2		
Pigtail type		LC/UPC, 900um		

Order Information:





6. Single Channel Erbium-Doped Optical Amplifier

Our single channel EDFA product has been widely used in the fields of optic fiber sensing, CATV or SDH system. Single EDFA uses 980nm pump laser to provide energy. With 1550.12nm 100g pass-band filter, it can improve the receiver sensitivity. The product can be configured in AGC, APC or ACC work mode through GUI. Using the high reliability temperature-controlling technology make the products have excellent thermal performance under wide temperature range.

Product Feature

- With 1550.12nm 100g pass-band filter
- AGC/APC/ACC operation mode
- Low noise figure and power consumption
- High stability and reliability
- Customizable

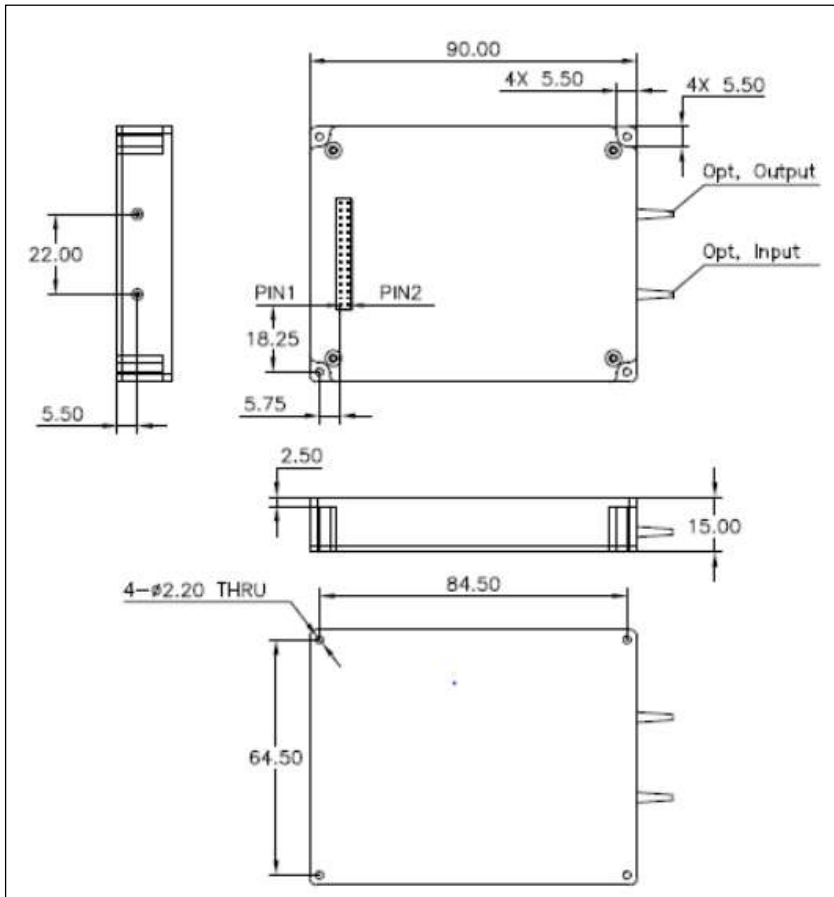
Main Application

- Optical fiber sensing
- CATV
- SDH system
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm		1550.12	
Bandwidth	G		100	
Input power	dBm	-40		-10
Output power	dBm		12	15
Noise Figure	dB		4.5	5
Operation temperature	°C	0		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			20
Pigtail Length	cm	100±2		
Pigtail type		LC/UPC, 900um		

Order Information:

SZK-	Pack	Type	Wavelength	Output Power	Gain	Pigtail Type	Pigtail Length
	<ul style="list-style-type: none"> → M: Module → D: Benchtop → C: Customized 	<ul style="list-style-type: none"> → 1, PM EDFA → 2, YEDFA → 3, CATV EDFA → 4, Pulse EDFA → 5, DWDM EDFA → 6, Raman Amplifier → 7, Pump Driver 	<ul style="list-style-type: none"> → 15, 1550nm → 9, 980 nm → C, C Band → L, L Band → C&L, C+L Band → Customized 	<ul style="list-style-type: none"> → 23, 23dBm → X, Customized 	<ul style="list-style-type: none"> → 20, 20dB FGA → 1520, 15dB~20dB VGA → X, Customized 	<ul style="list-style-type: none"> → LC/UPC → LC/APC → FC/UPC → FC/APC → SC/UPC → SC/APC → X, Customized 	<ul style="list-style-type: none"> → 10, 1m → 15, 1.5m → 20, 2m → X, Customized



7. C+L Band Erbium-Doped Optical Amplifier

Our C+L band EDFA product has been widely used in the fields of optic fiber sensing, quantum communication or special application. C+L band EDFA uses 980nm pump laser to provide energy. It can amplify c-band signal and l-band signal at the same time. The product can be configured in ACC/APC/AGC work mode through GUI. Using the high reliability temperature-controlling technology make the products have excellent thermal performance under wide temperature range.

Product Feature

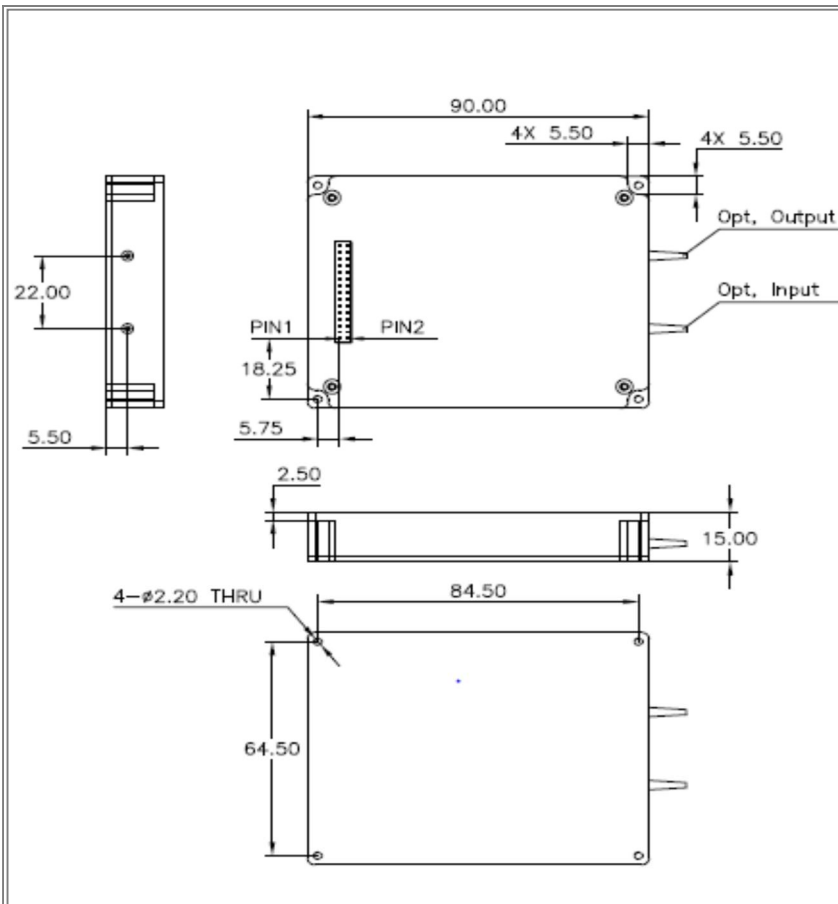
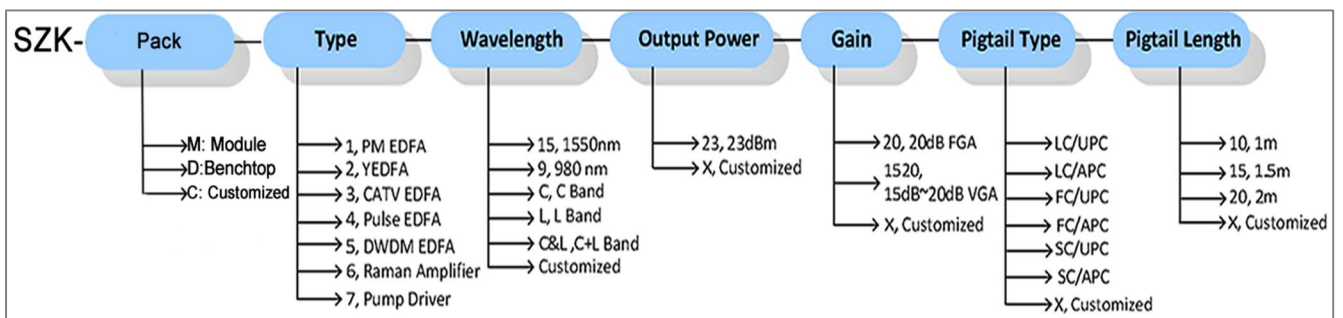
- Amplify c-band signal and l-band signal
- ACC/APC/AGC operation mode
- Low noise figure and power consumption
- High stability and reliability
- Customizable

Main Application

- Optical fiber sensing
- Quantum communication
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm	1528~1567&1575~1605		
Input power	dBm	-35	-30	0
Output power	dBm		-10	
Gain	dB		20	
Noise Figure	dB		5.5	6.5
Operation temperature	°C	0		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			20
Pigtail Length	cm	100±2		
Pigtail type		LC/UPC, 900um		

Order Information:



8. Ultra-narrow Linewidth Laser

Our ultra-narrow linewidth laser product has been widely used in the fields of optic fiber sensing, hydrophone system, LIDAR, oil monitor or special application. The ultra-narrow optical fiber filter with unique design guarantees the single frequency operation of the fiber laser. Besides, it can eliminate the impacts of external temperature change and vibration from the output optical wavelength by adopting unique temperature control technology and vibration-proof structure; hence it realizes the stable single longitudinal mode and the single frequency laser output of the ultra-narrow line width. The ultra-narrow line-width fiber laser has excellent properties, the optical output frequency spectrum of which reaches to kHz magnitude. Otherwise, it has ultra-low frequency noise and intensity noise, and the side mode suppression ratio of its output spectrum is more than 50dB. Moreover, the high-strength packaging with unique design guarantees that the fiber laser modules can adapt different environment well and can realize stable single longitudinal mode output without mode hopping under the influence of the external conditions such as temperature variation, vibration and shock. The output power of the ultra-narrow linewidth fiber light source can up to 50mW, and the products with higher output power can be provided according to requirements.

Product Feature

- Ultra-narrow linewidth less than 3K
- High output optical power
- stable frequency and output power
- High stability and reliability
- Customizable

Main Application

- Optical fiber sensing
- LIDAR
- Hydrophone system
- College and research institute

Parameter	Unit	Min	Type	Max
Wavelength	nm	1530	1550.12	1560
Linewidth	kHz			3
SNR	dB	55		
Output power	mW		10	50
RIN	dB	<-120@1M		
Phase noise@200Hz		<8 urad/rt-Hz 1m OPD		
Operation temperature	°C	-10		50
Storage temperature	°C	-40		85
Supply voltage	V	4.75	5	5.25
Power consumption	W			30
Pigtail Length	cm	100±2		
Pigtail type		LC/UPC, 900um		

Order Information:

