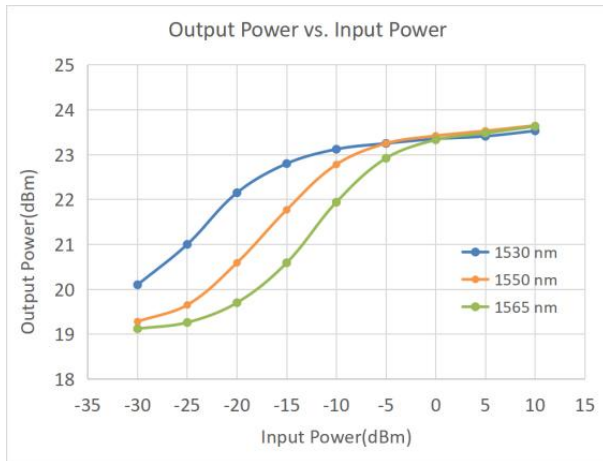


SMR Series Fiber Amplifier

1. C-band Erbium-doped Fiber Booster Amplifier

Erbium-doped fiber booster amplifier is a kind of power amplifier operating in C band. It can be used to amplify the laser power, which is in the range of -6 ~+3dBm, to 15dBm power level or even higher, and the maximum output power is up to 26dBm. Booster amplifier is often used to increase the emission power of laser source and then expand the transmission distance of the optical signals in fibers.



Features

- Wide Spectrum Range
- High Output Power
- Low noise figure

Applications

- Optical Communications
- Fiber Sensing
- Fiber Laser

Specifications

| Optical Parameters | Unit | Typical Value | Remarks |
|------------------------------|---------------------------|------------------------------|---------------------------------|
| Operating Wavelength | nm | 1530~1565 | C-band |
| Input Signal Power | dBm | -6~+3 | |
| Saturation Output Power | dBm | 15/17/20/23/25/26 | @-3dBm input |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | Peak to peak |
| Noise Figure | dB | ≤5.5 | |
| Polarization Dependent Gain | dB | ≤0.3 | |
| Polarization Mode Dispersion | ps | ≤0.5 | |
| Input/output Isolation | dB | ≥35 | |
| Optical Power Monitoring | - | output power | |
| Fiber Type | - | SMF-28 | |
| Fiber connector | | FC/APC | |
| Control mode | - | ACC/APC | |
| General Parameters | Benchtop | | Module |
| Control function | LCD display and button | | RS232 serial port communication |
| Remote Control Port | DB9 Female | | DB9 Female |
| Power Supply | 100~240V AC, ≤30W | | 5V3A DC, ≤15W |
| Dimensions | 260(W)×280(D)×120(H) [mm] | | 125(W)×150(D)×20(H)[mm] |

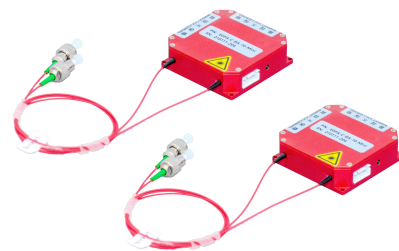
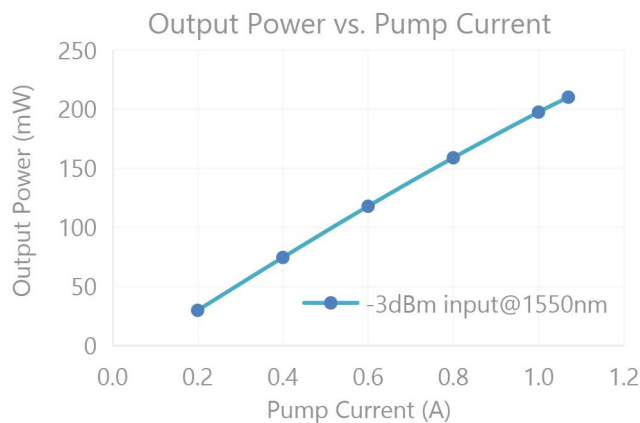
| | |
|-----------------------------|-----------|
| Operating Temperature | -5 ~ 35°C |
| Operating Relative Humidity | 0~70% |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Saturation Output Power(dBm) | Fiber | Packaging |
|--------------------|------------|----------------------|------------------------------|-----------|-------------------------|
| SMR-C-BA-XX-SM-M/B | C=C band | BA=Booster Amplifier | 15/17/20/23/25/26 | SM=SMF-28 | M=Module B=Benchttop |

2. C-band Erbium-doped Fiber Booster Amplifier Micro-Size Module

This micro-size EDFA BA module adopts a unique miniaturized design and packaging. The maximum output power is up to 23dBm in C band. With a compact size of only 50×50×15mm, it is extremely suitable for use in narrow space situations.



Features

- Compact
- High Output Power
- Low noise figure

Applications

- Optical Communications
- Fiber Sensing
- Fiber Laser

Specifications

| Optical Parameters | Unit | Typical Value | Remarks |
|------------------------------|--|------------------------------|--------------|
| Operating Wavelength | nm | 1530~1565 | C-band |
| Input Signal Power | dBm | -6~+3 | |
| Saturation Output Power | dBm | 10/13/17/20/23 | @-3dBm input |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | Peak to peak |
| Noise Figure | dB | ≤5.5 | |
| Polarization Dependent Gain | dB | ≤0.3 | |
| Polarization Mode Dispersion | ps | ≤0.5 | |
| Input/output Isolation | dB | ≥35 | |
| Optical Power Monitoring | - | output power | |
| Fiber Type | - | SMF-28 | |
| Fiber connector | | FC/APC | |
| Control mode | - | ACC/APC | |
| General Parameters | Module | | |
| Control Function | RS232 or TTL serial port communication | | |

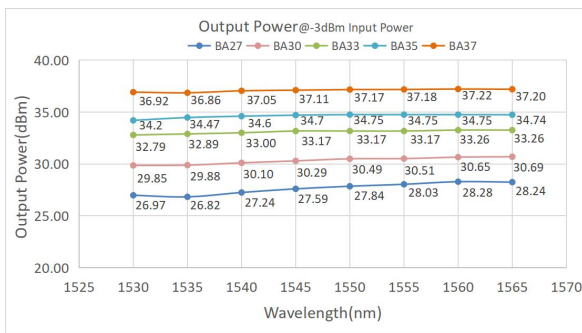
| | |
|-----------------------------|--------------------------------------|
| Remote Control Port | XH2.54- 4 PIN, PIN1~4: +5V/GND/TX/RX |
| Power Supply | 5V2A DC, ≤10W |
| Dimensions | 50(W)×50(D)×15(H) [mm] |
| Operating Temperature | -5 ~ 35°C |
| Operating Relative Humidity | 0~70% |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Saturation Output Power(dBm) | Fiber | Packaging |
|--------------------|------------|----------------------|------------------------------|-----------|-----------------------|
| SMR-C-BA-XX-SM-Mic | C=C band | BA=Booster Amplifier | 10/13/17/20/23 | SM=SMF-28 | Mic=micro-size module |

3. C-band High Power Single-Mode Erbium-doped Fiber Amplifier

The high-power EDFA is based on the principle of stimulated emission amplification of optical signals in erbium-ytterbium co-doped fiber. By adopting an excellent optical design and thermal management, it can achieve high-power laser output within the wavelength range of 1535~1565nm. It has the advantages of high-power and low-noise, and can be used in fiber optic communication, lidar, etc.



Features

- Wide Spectrum Range
- High Output Power, Up to 10W
- Low noise figure

Applications

- Optical Communications
- LIDAR
- Nonlinear Optics

Specifications

| Optical Parameters | Unit | Typical Value | | Remarks |
|-------------------------------|------|------------------------------|--------|---|
| Operating Wavelength | nm | 1535~1565 | | |
| Input Signal Power | dBm | -6~+10 | | |
| Saturation Output Power | dBm | 27/30/33/35/37/40 | | For SM Model@-3dBm input For PM Model@0dBm input |
| Noise Figure | dB | ≤6.0 | | |
| Input/output Isolation | dB | ≥35 | | |
| Optical Power Monitoring | - | Input/output power | | |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | | Peak to peak |
| Fiber Type/Fiber Connector | - | SMF-28 | PM1550 | FC/APC Connector |
| Polarization Dependent Gain | dB | ≤0.3 | - | |
| Polarization Mode Dispersion | ps | ≤0.5 | - | |
| Polarization Extinction Ratio | dB | - | ≥23 | |

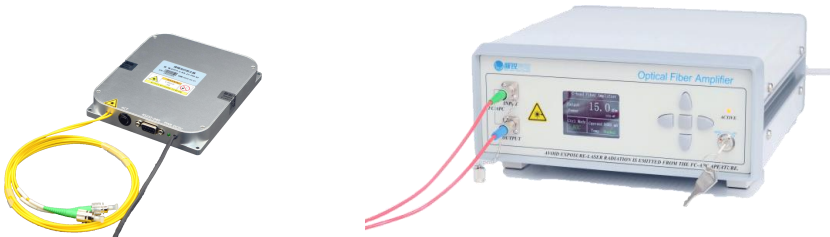
| | | |
|-------------------------------|---------------------------|---------------------------------|
| Control mode | - | ACC/APC |
| General Parameters | Benchtop | Module |
| Control function | LCD display and button | RS232 serial port communication |
| Remote Control Port | DB9 Female | DB9 Female |
| Power Supply | 100~240V AC, 15~150W | 12VDC 3~12A , 15~150W |
| Dimensions for 27/30/33/35dBm | 260(W)×320(D)×120(H) [mm] | 125(W)×150(D)×31.5(H) [mm] |
| Dimensions for 37/40dBm | 376(W)×340(D)×112(H) [mm] | 139(W)×235(D)×70(H) [mm] |
| Operating Temperature | -5 ~ 35°C | |
| Operating Relative Humidity | 0~70% | |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Output Power(dBm) | Fiber | Packaging |
|--------------------------|------------|----------------|-------------------|------------------------|------------------------|
| SMR-C-HP-BA-XX-SM/PM-M/B | C=C band | HP-BA | 27/30/33/35/37/40 | SM=SMF-28 PM=PM1550 | M=Module B=Benchtop |

4. C-band Polarization Maintaining Erbium-doped Fiber Amplifier

The C-band polarization-maintaining Erbium-doped Fiber Amplifier(PM EDFA) is a series of fiber amplifier products specifically used in PM fiber systems, including PA, BA, and LA-type PM EDFA. It has the advantages of high polarization extinction ratio, high gain, high power, and low noise, and various product packaging forms are available. The C-band PM EDFA can be applied in fields such as fiber optic communication, lidar, and fiber sensing.



Features

- High PER
- High Output Power
- Low noise figure

Applications

- Optical Communications
- Fiber Sensing
- LIDAR

Specifications

| Optical Parameters | Unit | Typical Value | | | Remarks |
|-------------------------------|------|------------------------------|----------------|--------|---|
| Amplifier Type | - | PA | BA | LA | * |
| Operating Wavelength | nm | 1530~1565 | | | C-band |
| Input Signal Power | dBm | -45~-25 | -6~+3 | -25~-3 | |
| Saturation Output Power | dBm | 14 | 17/20/23/25/26 | | @-3dBm input for BA @-10dBm input for LA |
| Small signal Optical Gain | dB | ≥30/35/45 | ≥25 | ≥25 | |
| Noise Figure | dB | ≤4.5 | ≤5.0 | ≤5.0 | |
| Polarization Extinction Ratio | dB | Typ. ≥23; Min. ≥20 | | | |
| Input/output Isolation | dB | ≥35 | | | |
| Optical Power Monitoring | - | Output Power | | | |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | | | Peak to peak |

| | | | |
|-----------------------------|---------------------------|---------------------------------|--|
| Fiber Type | - | PM1550 | |
| Fiber connector | | FC/APC | |
| Control mode | - | ACC/APC | |
| General Parameters | Benchtop | Module | |
| Control function | LCD display and button | RS232 serial port communication | |
| Remote Control Port | DB9 Female | DB9 Female | |
| Power Supply | 100~240V AC, ≤30W | 5V3A DC, ≤15W | |
| Dimensions | 260(W)×280(D)×120(H) [mm] | 125(W)×150(D)×20(H)[mm] | |
| Operating Temperature | -5 ~ 35°C | | |
| Operating Relative Humidity | 0~70% | | |

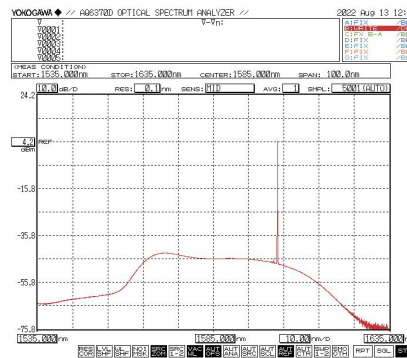
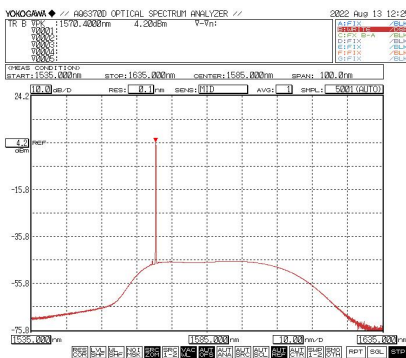
* PA=Pre Amplifier; BA=Booster Amplifier; LA=In-Line Amplifier;

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Gain/Output Power | Fiber | Packaging |
|--------------------------|------------|----------------|--------------------------------------|------------|------------------------|
| SMR-C-PA/BA/LA-XX-PM-M/B | C=C band | PA | 30/35/45 (Gain in dB) | PM= PM1550 | M=Module B=Benchtop |
| | | BA | 17/20/23/25/26 (Output Power in dBm) | | |
| | | LA | 17/20/23/25/26 (Output Power in dBm) | | |

5. L-band Erbium-doped Fiber Booster Amplifier

Erbium-doped fiber booster amplifier is a kind of power amplifier operating in L band. It can be used to amplify the laser power, which is in the range of -6 ~+3dBm, to 15dBm power level or even higher, and the maximum output power is up to 26dBm. Booster amplifier is often used to increase the emission power of laser source and then expand the transmission distance of the optical signals in fibers.



Features

- Wide Spectrum Range
- High gain
- Low noise figure

Applications

- Optical Communications
- Fiber Sensing
- Fiber Laser

Specifications

| Optical Parameters | Unit | Typical Value | Remarks |
|-------------------------|------|-------------------|--------------|
| Operating Wavelength | nm | 1570~1605 | L-band |
| Input Signal Power | dBm | -6~+3 | |
| Saturation Output Power | dBm | 15/17/20/23/25/26 | @-3dBm input |
| Noise Figure | dB | ≤5.0 | |

| | | | | |
|-------------------------------|----|----------------------------|---------------------------------|--------------|
| Input/output Isolation | dB | ≥35 | | |
| Optical Power Monitoring | - | Output Power | | |
| Output Power stability | dB | ±0.02(15min.); ±0.05(8hrs) | | Peak to peak |
| Fiber Type/Fiber Connector | - | SMF-28 | PM1550 | |
| Polarization Dependent Gain | dB | ≤0.3 | - | |
| Polarization Mode Dispersion | ps | ≤0.5 | - | |
| Polarization Extinction Ratio | dB | - | ≥23 | |
| Fiber connector | | FC/APC | | |
| Control mode | - | ACC/APC | | |
| General Parameters | | Benchtop | Module | |
| Control function | | LCD display and button | RS232 serial port communication | |
| Remote Control Port | | DB9 Female | DB9 Female | |
| Power Supply | | 100~240V AC, ≤30W | 5V3A DC, ≤15W | |
| Dimensions | | 260(W)×280(D)×120(H) [mm] | 125(W)×150(D)×20(H)[mm] | |
| Operating Temperature | | -5 ~ 35°C | | |
| Operating Relative Humidity | | 0~70% | | |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Saturation Output Power(dBm) | Fiber | Packaging |
|-----------------------|------------|-----------------------|------------------------------|------------------------|------------------------|
| SMR-L-BA-XX-SM/PM-M/B | L=L band | BA= Booster Amplifier | 15/17/20/23/25/26 | SM=SMF-28 PM= M1550 | M=Module B=Benchtop |

6. L-band High Power Erbium-doped Fiber Amplifier

The high-power EDFA is based on the principle of stimulated emission amplification of optical signals in erbium-ytterbium co-doped fiber. By adopting a excellent optical design and thermal management, it can achieve high-power laser output within the wavelength range of 1570~ 1605nm. It has the advantages of high-power and low-noise, and can be used in fiber optic communication, lidar, etc.



Features

- Spectrum Range
- High Output Power, Up to 10W
- Low noise figure

Applications

- Optical Communications
- LIDAR
- Nonlinear Optics

Specifications

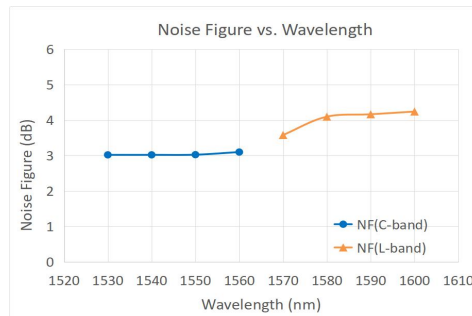
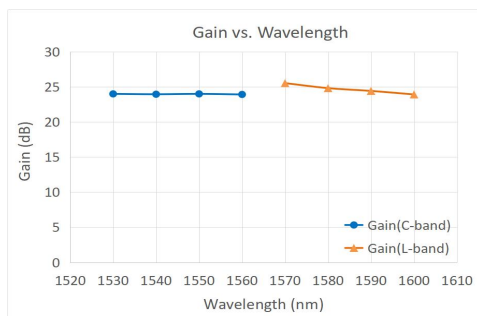
| Optical Parameters | Unit | Typical Value | | Remarks |
|-------------------------------|---------------------------|---------------------------------|--------|---|
| Operating Wavelength | nm | 1570~1605 | | |
| Input Signal Power | dBm | -6~+10 | | |
| Saturation Output Power | dBm | 27/30/33/35/37/40 | | For SM Model@-3dBm input For PM Model@0dBm input |
| Noise Figure | dB | ≤6.0 | | |
| Input/output Isolation | dB | ≥35 | | |
| Optical Power Monitoring | - | Input/output power | | |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | | Peak to peak |
| Fiber Type/Fiber Connector | - | SMF-28 | PM1550 | FC/APC Connector |
| Polarization Dependent Gain | dB | ≤0.3 | - | |
| Polarization Mode Dispersion | ps | ≤0.5 | - | |
| Polarization Extinction Ratio | dB | - | ≥23 | |
| Control mode | - | ACC/APC | | |
| General Parameters | Benchtop | Module | | |
| Control function | LCD display and button | RS232 serial port communication | | |
| Remote Control Port | DB9 Female | DB9 Female | | |
| Power Supply | 100~240V AC, 15~150W | 12VDC 3~12A , 15~150W | | |
| Dimensions for 27/30/33/35dBm | 260(W)×280(D)×120(H) [mm] | 125(W)×150(D)×31.5(H) [mm] | | |
| Dimensions for 37/40dBm | 376(W)×340(D)×112(H) [mm] | 139(W)×235(D)×70(H) [mm] | | |
| Operating Temperature | -5 ~ 35°C | | | |
| Operating Relative Humidity | 0~70% | | | |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Output Power(dBm) | Fiber | Packaging |
|------------------------------|------------|----------------|-------------------|------------------------|------------------------|
| SMR-L-HP-BA-XX- SM/PM-M/B | L=L band | HP-BA | 27/30/33/35/37/40 | SM=SMF-28 PM=PM1550 | M=Module B=Benchtop |

7. C+L band Erbium-doped Fiber Booster Amplifier

The C+L band EDFA can amplify the optical signals of both C-band and L-band simultaneously. Its operating wavelength cover 1528~1563nm and 1570~1603 nm. It can automatically recognize the wavelength of signal light and provide low noise and high efficiency optical power amplification.



Features

- C+L band Spectrum Range
- High gain
- Low noise figure

Applications

- Optical Communications
- Fiber Sensing
- Fiber Laser

Specifications

| Optical Parameters | Unit | Typical Value | | Remarks |
|-------------------------------|------|------------------------------|---------------------------------|--------------|
| Operating Wavelength | nm | 1528~1563 & 1570~1603 | | C+Lband |
| Input Signal Power | dBm | -6~+3 | | |
| Saturation Output Power | dBm | 15/17/20/23/25/26 | | @-3dBm input |
| Noise Figure | dB | ≤5.0 | | |
| Input/output Isolation | dB | ≥35 | | |
| Optical Power Monitoring | - | Output Power | | |
| Output Power stability | dB | ≤±0.02(15min.); ≤±0.05(8hrs) | | Peak to peak |
| Fiber Type/Fiber Connector | - | SMF-28 | PM1550 | |
| Polarization Dependent Gain | dB | ≤0.3 | - | |
| Polarization Mode Dispersion | ps | ≤0.5 | - | |
| Polarization Extinction Ratio | dB | - | ≥23 | |
| Fiber connector | | FC/APC | | |
| Control mode | - | ACC/APC | | |
| General Parameters | | Benchtop | Module | |
| Control function | | LCD display and button | RS232 serial port communication | |
| Remote Control Port | | DB9 Female | DB9 Female | |
| Power Supply | | 100~240V AC, ≤30W | 5V3A DC, ≤15W | |
| Dimensions | | 260(W)×280(D)×120(H) [mm] | BA15~20:125(W)×150(D)×20(H)[mm] | |
| | | | BA23~26:139(W)×206(D)×27(H)[mm] | |
| Operating Temperature | | -5 ~ 35°C | | |
| Operating Relative Humidity | | 0~70% | | |

Ordering Information/ Product Code

| Model | Wavelength | Amplifier Type | Saturation Output Power(dBm) | Fiber | Packaging |
|------------------------|-----------------|--------------------------|------------------------------|------------------------|------------------------|
| SMR-CL-BA-XX-SM/PM-M/B | CL= C+L band | BA= Booster Amplifier | 15/17/20/23/25/26 | SM=SMF-28 PM= M1550 | M=Module B=Benchtop |

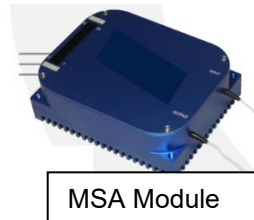
STOL Series Optical Fiber Amplifiers

8. Erbium Doped Fiber Amplifier (EDFA)

Our EDFA is a high-gain optical amplifier which is an easy-to-use and cost-efficient solution for photonic subsystem, OEM integration, and fiber optic system integration. Software control via an a standard TTL RS-232 interface is available for status monitoring and pump current adjustments. It also features pump laser protection and alarms to ensure the reliability and safety of the device. Our EDFA requires a single +5 Volt DC power supply for operation. Contact us for more information.

Features

- High optical gain
- Low noise figure
- RS-232 standard for remote control
- Single mode and PM mode
- Optical connectors FC/APC, SC/APC
- Rackmount, benchtop and module



Applications

- Subsystem integration for optical links
- Free space communication
- Satellite/ground link
- Pulse amplification
- General purpose optical amplifier



Specifications:

EDFA single mode C band

| Model | Pre-amp /Amplifier | Stage | Optical return loss (dB) | Noise figure (dB) | Output power (dBm) | Polarized mode dispersion (ps) | Wavelength (nm) | Optical gain (dB) | Special feature |
|----------------------|--------------------|-------|--------------------------|-------------------|--------------------|--------------------------------|-----------------|-------------------|----------------------------|
| STOL-EDFA-PA-WB-M | Pre-amp | 2 | 50 | 4 | 10 | 0.1 | 1530-1560 | 40 | Wide band |
| STOL-EDFA-PA-NB-M | Pre-amp | 2 | 50 | 4 | 10 | 0.1 | 1530-1560 | 50 | Narrow band |
| STOL-EDFA-PA-C-R | Pre-amp | 1 | 50 | 4.5 | 15 | 0.1 | 1528-1563 | 25 | - |
| STOL-EDFA-PA-C-B | Pre-amp | 1 | 50 | 4.5 | 15 | 0.1 | 1528-1563 | 25 | - |
| STOL-EDFA-PA-C-M | Pre-amp | 1 | 50 | 4.5 | 15 | 0.1 | 1528-1563 | 25 | - |
| STOL-EDFA-PA-MSA-M | Pre-amp | 1 | 50 | 4.5 | 15 | 0.1 | 1528-1563 | 28 | MSA |
| STOL-EDFA-C-MP-MSA-M | Amplifier | 1 | 50 | 6.5 | 20 | 0.1 | 1528-1563 | 30 | MSA |
| STOL-EDFA-C-LC-MSA-M | Amplifier | 1 | 50 | 4.5 | 16 | 0.1 | 1528-1563 | 28 | MSA, low power consumption |
| STOL-EDFA-C-DP-XX-R | Amplifier | 2 | 50 | 5 | 22-26 | 1 | 1528-1563 | 35 | - |
| STOL-EDFA-C-SP-XX-R | Amplifier | 1 | 50 | 5 | 17-21 | 1 | 1528-1563 | 30 | - |
| STOL-EDFA-C-DP-XX-B | Amplifier | 2 | 50 | 5 | 22-26 | 1 | 1528-1563 | 35 | - |
| STOL-EDFA-C-SP-XX-B | Amplifier | 1 | 50 | 5 | 17-21 | 1 | 1528-1563 | 30 | - |
| STOL-EDFA-C-GB-XX-R | Amplifier | 2 | 50 | 5 | 18-24 | 0.5 | 1530-1560 | 13 - 21 | Gain flatten, multichannel |

MSA = multiple source agreement

EDFA single mode L band

| Model | Pre-amp /Amplifier | Stage | Optical return loss (dB) | Noise figure (dB) | Output power (dBm) | Polarized mode dispersion (ps) | Wavelength (nm) | Optical gain (dB) | Power consumption (W) |
|---------------------|--------------------|-------|--------------------------|-------------------|--------------------|--------------------------------|-----------------|-------------------|-----------------------|
| STOL-EDFA-PA-L-R | Pre-amp | 1 | 50 | 4.5 | 14 | 0.1 | 1568-1605 | 25 | 60 |
| STOL-EDFA-PA-L-B | Pre-amp | 1 | 50 | 4.5 | 14 | 0.1 | 1568-1605 | 25 | 60 |
| STOL-EDFA-PA-L-M | Pre-amp | 1 | 50 | 4.5 | 14 | 0.1 | 1568-1605 | 25 | 20 |
| STOL-EDFA-L-DP-XX-R | Amplifier | 2 | 50 | 5 | 22-23 | 1.0 | 1568-1605 | 35 | 60 |
| STOL-EDFA-L-SP-XX-R | Amplifier | 1 | 50 | 5 | 17-21 | 1.0 | 1565-1625 | 30 | 60 |
| STOL-EDFA-L-DP-XX-B | Amplifier | 2 | 50 | 5 | 22-23 | 1.0 | 1568-1605 | 35 | 60 |
| STOL-EDFA-L-SP-XX-B | Amplifier | 1 | 50 | 5 | 17-21 | 1.0 | 1568-1605 | 30 | 60 |

EDFA PM mode C band

| Model | Pre-amp /Amplifier | Stage | Noise figure (dB) | Optical return loss (dB) | Polarized mode dispersion (ps) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) | Power consumption (W) |
|------------------------|--------------------|-------|-------------------|--------------------------|--------------------------------|--------------------|-----------------|-------------------|-----------------------|
| STOL-EDFA-PA-C-PM-B | Pre-amp | 1 | 4.5 | 50 | 0.1 | 15 | 1528-1563 | 25 | 60 |
| STOL-EDFA-PA-C-PM-M | Pre-amp | 1 | 4.5 | 50 | 0.1 | 15 | 1528-1563 | 25 | 20 |
| STOL-EDFA-C-DP-XX-PM-R | Amplifier | 2 | 5 | 50 | 1.0 | 22-26 | 1528-1563 | 35 | 60 |
| STOL-EDFA-C-SP-XX-PM-R | Amplifier | 1 | 5 | 50 | 1.0 | 17-21 | 1528-1563 | 30 | 60 |
| STOL-EDFA-C-DP-XX-PM-B | Amplifier | 2 | 5 | 50 | 1.0 | 22-26 | 1528-1563 | 35 | 60 |
| STOL-EDFA-C-SP-XX-PM-B | Amplifier | 1 | 5 | 50 | 1.0 | 17-20 | 1528-1563 | 30 | 60 |

EDFA PM mode L band

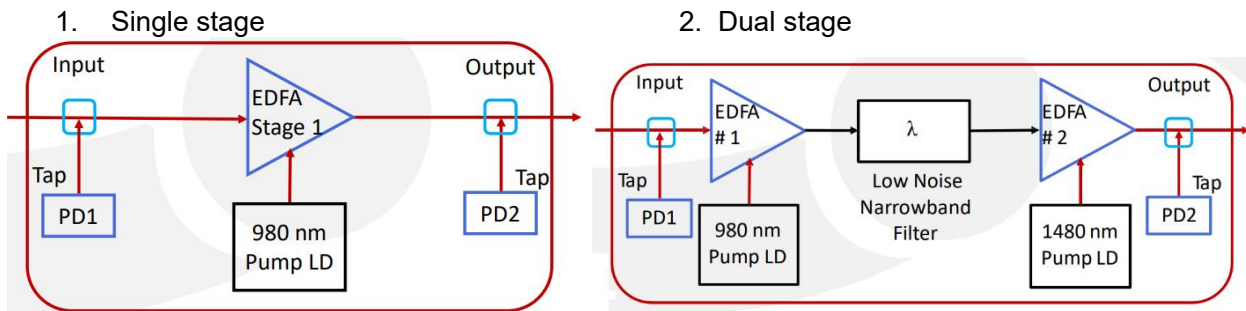
| Model | Pre-amp /Amplifier | Stage | Noise figure (dB) | Optical return loss (dB) | Polarized mode dispersion (ps) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) | Power consumption (W) |
|------------------------|--------------------|-------|-------------------|--------------------------|--------------------------------|--------------------|-----------------|-------------------|-----------------------|
| STOL-EDFA-L-DP-XX-PM-R | Amplifier | 2 | 5 | 50 | 1.0 | 22 | 1568-1605 | 35 | 60 |
| STOL-EDFA-L-SP-XX-PM-R | Amplifier | 1 | 5 | 50 | 1.0 | 17-21 | 1565-1625 | 30 | 60 |
| STOL-EDFA-L-DP-XX-PM-B | Amplifier | 2 | 5 | 50 | 1.0 | 22 | 1568-1605 | 35 | 60 |
| STOL-EDFA-L-SP-XX-PM-B | Amplifier | 1 | 5 | 50 | 1.0 | 17-21 | 1568-1605 | 30 | 60 |

Ordering information:

STOL-EDFA-L-DP-XX-R

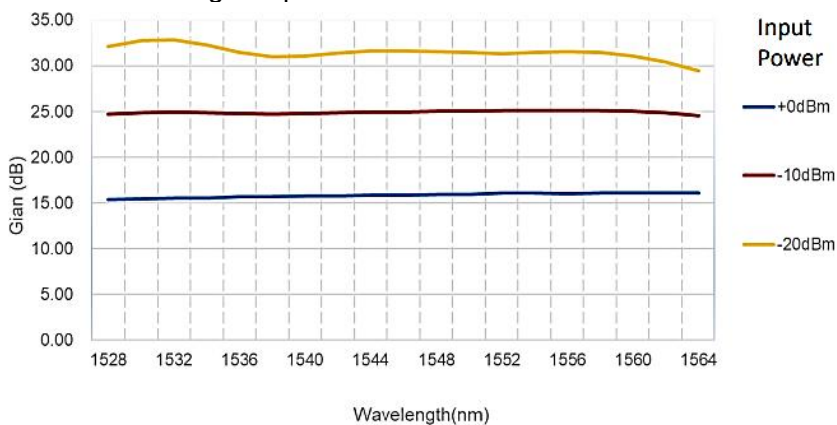
XX: output power level

Functional diagram:



Experimental Data:

Measurement of gain spectrum of STOL-EDFA-PA-R



Please contact us for more experimental data .

Accessories for module:



5V power adaptor (included)



30 PIN cable (included)



Adaptor Box (included)

2. Ytterbium Doped Fiber Amplifier (YDFA)

Our YDFA is a high gain single/dual/triple staged optical amplifier unit designed for applications requiring high efficiency optical amplification in the 1060nm regime in both CW and pulse mode operations. It is a self-contained, turn-key Module or Rackmount that designed to supply high and stable gain across the specified range of the wavelength window with different optical output power.

Features

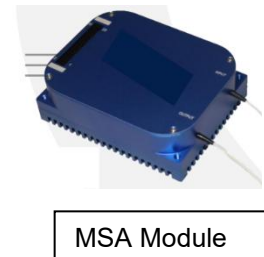
- High optical gain
- Low noise figure
- RS-232 standard for remote control
- Single mode and PM mode
- Optical connectors FC/APC, SC/APC
- Rackmount and module

Applications

- Subsystem integration for optical links
- Free space communication
- Satellite/ground link
- Pulse amplification
- General purpose optical amplifier



Big Module



MSA Module



Rackmount

Specifications:

YDFA Single mode

| Model | Pre-amp /Amplifier | Stage | Input/output isolation (dB) | Input power level (dBm) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) |
|-----------------|--------------------|-------|-----------------------------|-------------------------|--------------------|-----------------|-------------------|
| STOL-YDFA-19-BM | Amplifier | 1 | 30 | -10 to 10 | 19 | 1050-1074 | 25 |
| STOL-YDFA-30-BM | Amplifier | 2 | 30 | -10 to 10 | 30 | 1050-1074 | 40 |
| STOL-YDFA-19-R | Amplifier | 1 | 30 | -10 to 10 | 19 | 1050-1074 | 25 |
| STOL-YDFA-30-R | Amplifier | 2 | 30 | -10 to 10 | 30 | 1050-1074 | 40 |
| STOL-YDFA-40-R | Amplifier | 3 | 30 | -10 to 10 | 40 | 1050-1074 | 40 |
| STOL-YDFA-45-R | Amplifier | 3 | 27 | +3 to +13 | 45 | 1040-1075 | 45 |
| STOL-YDFA-MSA-M | Pre-amp | 1 | 30 | -40 to +5 | 18 | 1045-1070 | 25 |

Other range of wavelength is available upon request.

YDFA PM mode

| Model | Pre-amp /Amplifier | Stage | Input/output isolation (dB) | Input power level (dBm) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) |
|----------------------|--------------------|-------|-----------------------------|-------------------------|--------------------|-----------------|-------------------|
| STOL-YDFA-XX-TP-PM-R | Amplifier | 3 | 30 | -10 to 10 | 33,37,40 | 1050-1074 | 40 |
| STOL-YDFA-XX-DP-PM-R | Amplifier | 2 | 30 | -10 to 0 | 25,27,30 | 1050-1074 | 40 |
| STOL-YDFA-XX-SP-PM-R | Amplifier | 1 | 30 | -10 to 10 | 17,18,20 | 1050-1074 | 25 |
| STOL-YDFA-XX-DP-PM-M | Amplifier | 2 | 30 | -10 to 0 | 25,27,30 | 1050-1074 | 40 |
| STOL-YDFA-XX-SP-PM-M | Amplifier | 1 | 30 | -10 to 10 | 17,18,20 | 1050-1074 | 25 |

| | | | | | | | |
|-------------------|---------|---|----|----------|----|-----------|----|
| STOL-YDFA-PA-PM-R | Pre-amp | 2 | 30 | -40 to 5 | 18 | 1045-1070 | 25 |
| STOL-YDFA-PA-PM-M | Pre-amp | 2 | 30 | -40 to 5 | 18 | 1045-1070 | 25 |

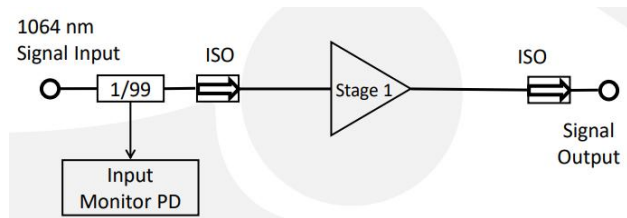
Ordering information:

STOL-YDFA-L-XX-TP-PM-R

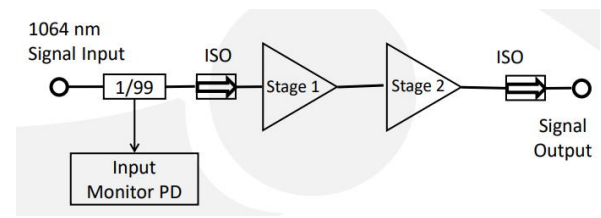
XX: output power level

Functional diagram:

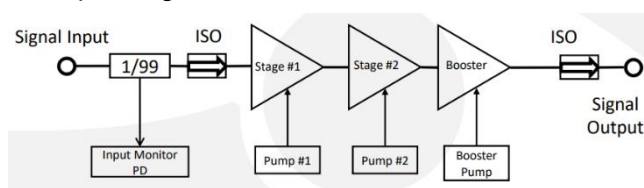
1. Single stage



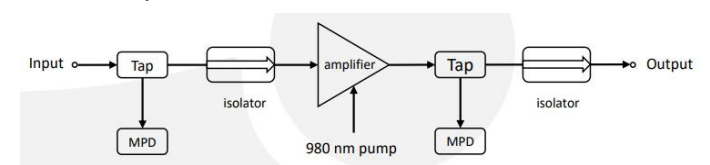
2. Dual stage



3. Triple stage

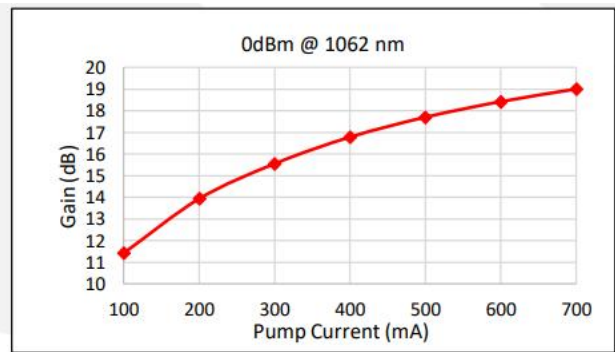
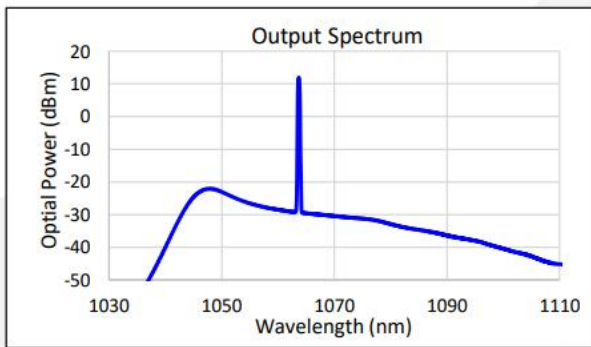


4. Pre-amp

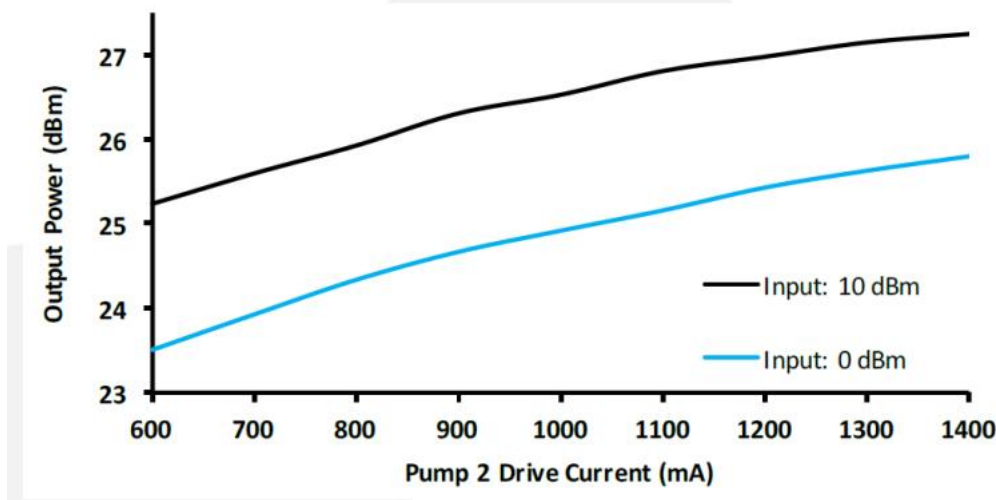


Experimental Data:

1. Measurement of optical power and optical gain of STOL-YDFA-XX-SP-PM-M



2. Measurement of output power of STOL-YDFA-XX-DP-PM-M



3. Erbium Ytterbium Doped Fiber Amplifier (EYDFA)

Our EYDFA is a high power, versatile amplifier designed for pulse laser CATV/PON networks, optical communication and other general purpose optical amplification applications. Based on multi-mode pumping Er/Yb double clad fiber technology, EYDFA is designed to produce high output power. Featuring adjustable output level power via ACC through the front panel and software control through USB, it is ideal for OEM integration applications. Contact us for more information.

Features

- High optical gain
- Automatic current control (ACC) standard
- LCD digital display and LED status indicators
- Single mode and PM mode
- Optical connectors FC/APC, SC/APC
- Multi-mode pumping Er/Yb double clad fiber



Big Module

Applications

- Subsystem integration for optical links
- Free space communication
- Satellite/ground link
- Pulse amplification
- General purpose optical amplifier



Rackmount

Specifications:

EYDFA Single mode

| Model | Pre-amp /Amplifier | Stage | Number of outputs ports | Noise figure (dB) | Polarization mode dispersion (ps) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) |
|------------------------|--------------------|-------|-------------------------|-------------------|-----------------------------------|--------------------|-----------------|-------------------|
| STOL-EYDFA-PA-33-YY-R | Pre-amp | 2 | 1 to 32 | 5 | 1.0 | 33 | 1528-1564 | 40 |
| STOL-EYDFA-PA-XX-YY-BM | Pre-amp | 2 | 1 to 32 | 5 | 1.0 | 33-37 | 1540-1570 | 35 |
| STOL-EYDFA-XX-YY-R | Amplifier | 2 | 1 to 32 | 5 | 1.0 | 30-37 | 1537-1564 | 40 |
| STOL-EYDFA-XX-YY-BM | Amplifier | 2 | 1 to 32 | 5 | 1.0 | 30-37 | 1537-1564 | 40 |
| STOL-EYDFA-XX-YY-R | Pre-amp | 1 | 2, 4 | 5 | 1.0 | 37,40,43 | 1540-1570 | 50 |

EYDFA PM mode

| Model | Pre-amp /Amplifier | Stage | Noise figure (dB) | Input power range (dBm) | Output power (dBm) | Wavelength (nm) | Optical gain (dB) |
|-----------------------|--------------------|-------|-------------------|-------------------------|--------------------|-----------------|-------------------|
| STOL-EYDFA-XX-PM-R | Amplifier | 2 | 5 | -3 to 7 | 30-37 | 1545-1565 | 26 |
| STOL-EYDFA-PA-XX-PM-R | Pre-amp | 2 | 5 | -12 to 7 | 33-37 | 1540-1570 | 40 |

Ordering information:

STOL-EYDFA-PA-XX-YY-M

XX: output power level

YY: number of output ports

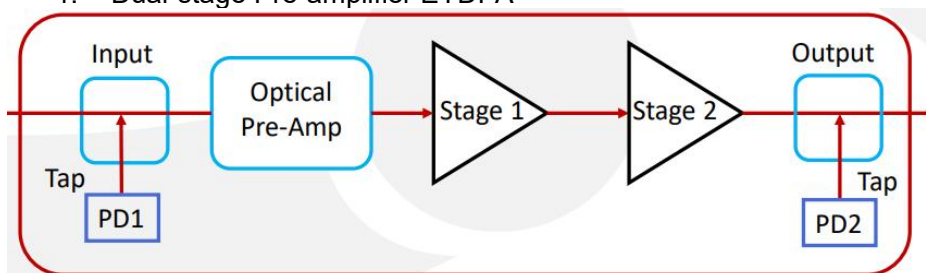
Example: STOL-EYDFA-PA-33-05-M

Output power = 33dBm

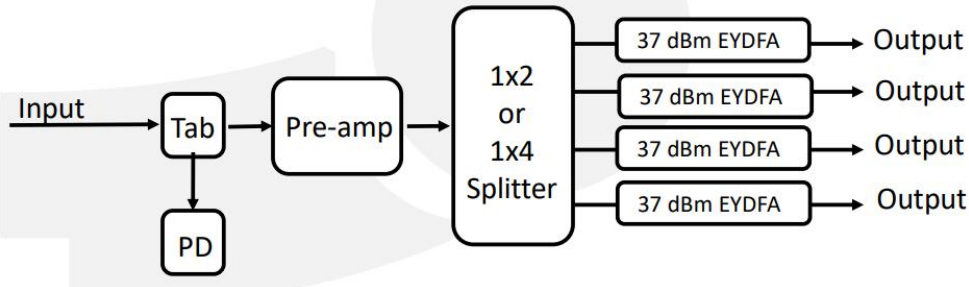
Number of output port = 5

Diagrams:

1. Dual-stage Pre-amplifier EYDFA



2. One stage Pre-amplifier EYDFA with 4 output ports

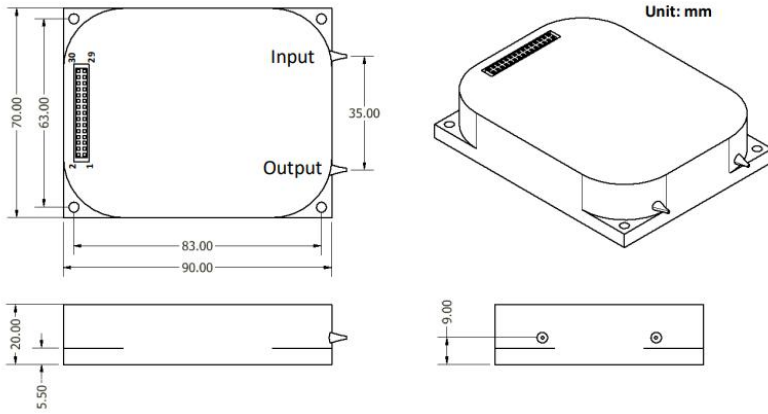


3. EYDFA Pre-amplifier with 32 output ports



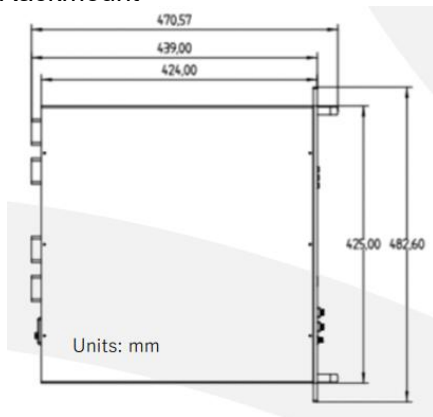
Mechanical drawings:

1. MSA Module

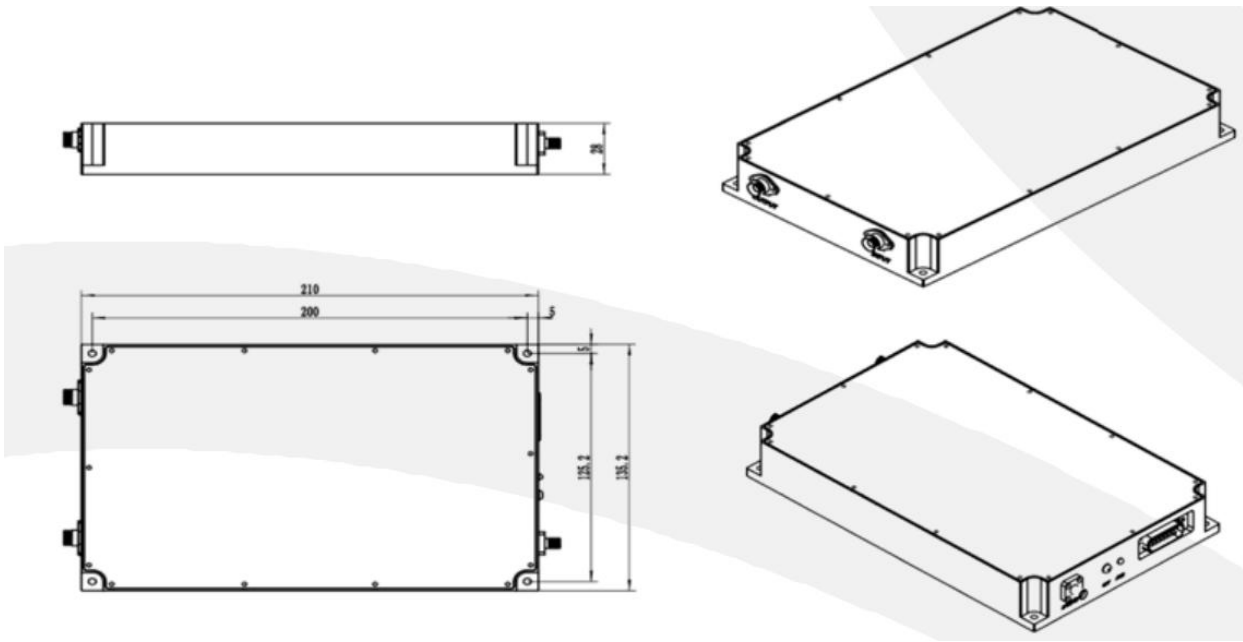


| PIN # | DESCRIPTION | PIN # | DESCRIPTION |
|-------|--|-------|---|
| 1 | +5V | 2 | +5V |
| 3 | NC | 4 | NC |
| 5 | GND | 6 | GND |
| 7 | RS232 RX, TTL | 8 | RS-232 TX, TTL |
| 9 | GND | 10 | GND |
| 11 | NC | 12 | NC |
| 13 | Amplifier Enable, active low, 3.3V LVCMOS | 14 | NC |
| 15 | Case Temp Alarm*, active high, 3.3V LVCOMS | 16 | NC |
| 17 | NC | 18 | NC |
| 19 | Loss of Input Alarm*, active high, 3.3V LVCMOS | 20 | Loss of Output Alarm*, active high, 3.3V LVCOMS |
| 21 | GND | 22 | GND |
| 23 | NC | 24 | NC |
| 25 | GND | 26 | GND |
| 27 | NC | 28 | NC |
| 29 | +5V | 30 | +5V |

2. Rackmount



3. Module



Different fiber amplifier might have different dimension. Please contact us for accurate dimension.

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

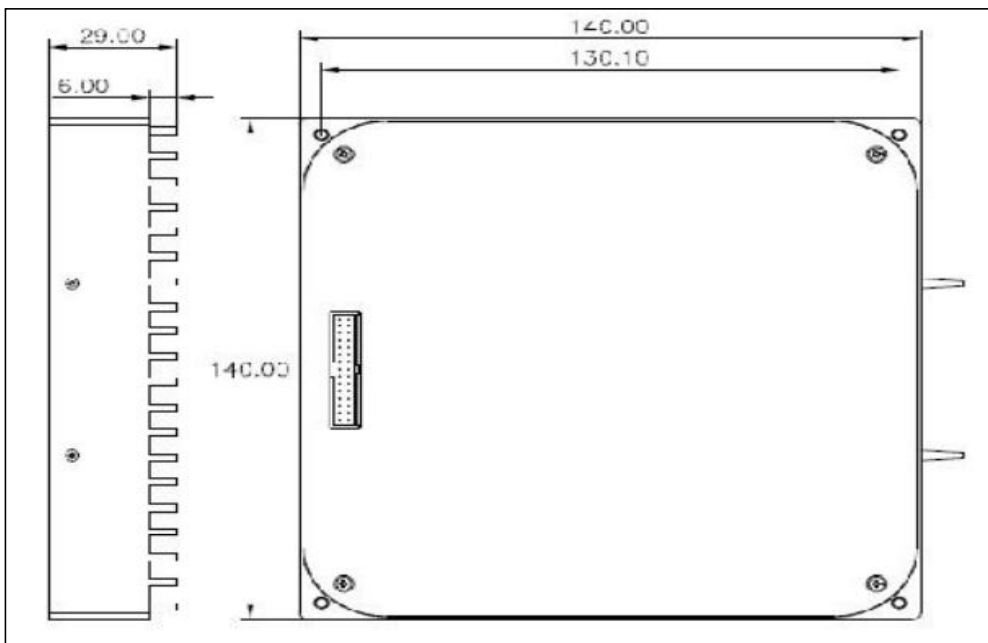
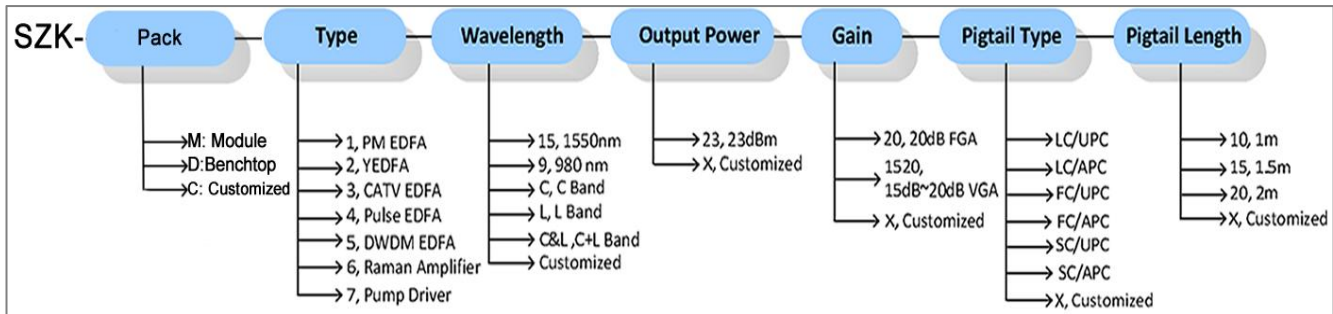
Main Application

- 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

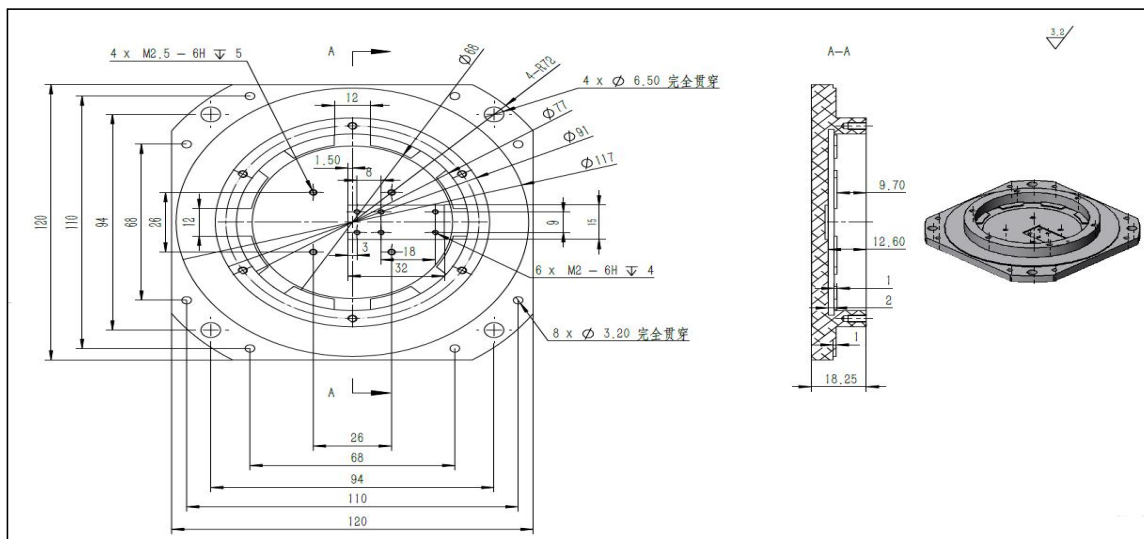
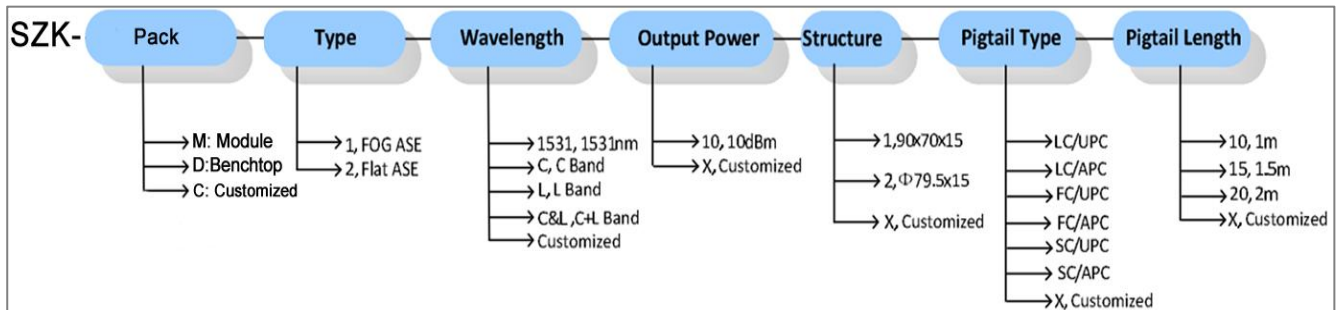
- Customizable

Main Application

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

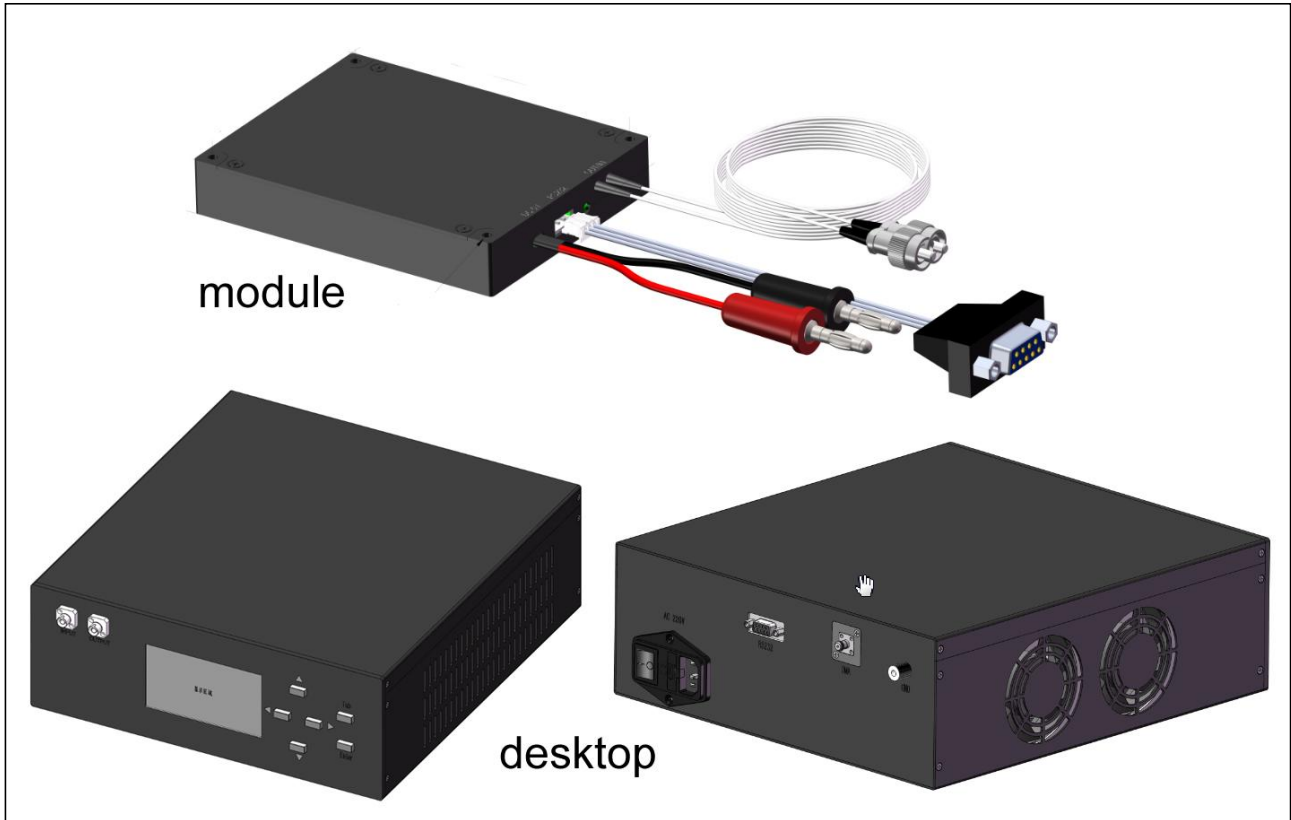
| Parameter | Unit | Min | Type | Max |
|--|------|-------------------|------|------|
| Average wavelength | nm | 1558 | 1560 | 1562 |
| Bandwidth | nm | ≥11nm | | |
| Output optical power | mW | 5 | - | - |
| The stability of output optical power @ normal temperature | % | - | - | 1% |
| The stability 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

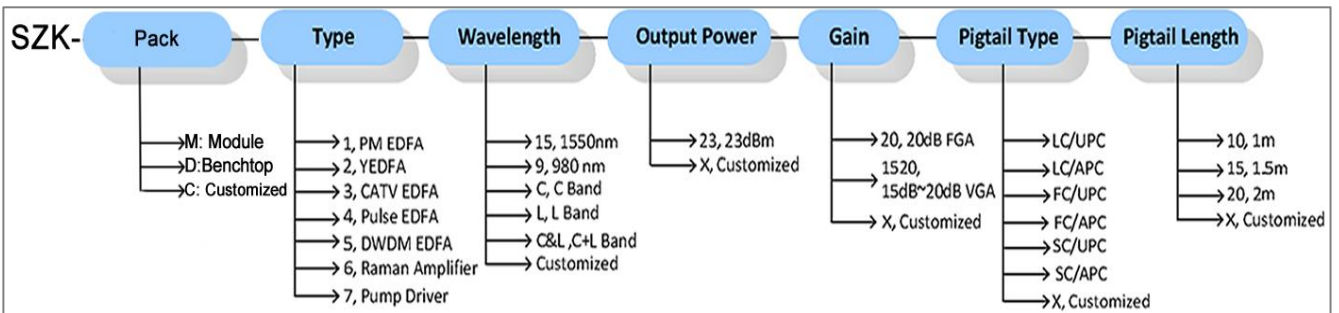
Main Application

- 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 | | |

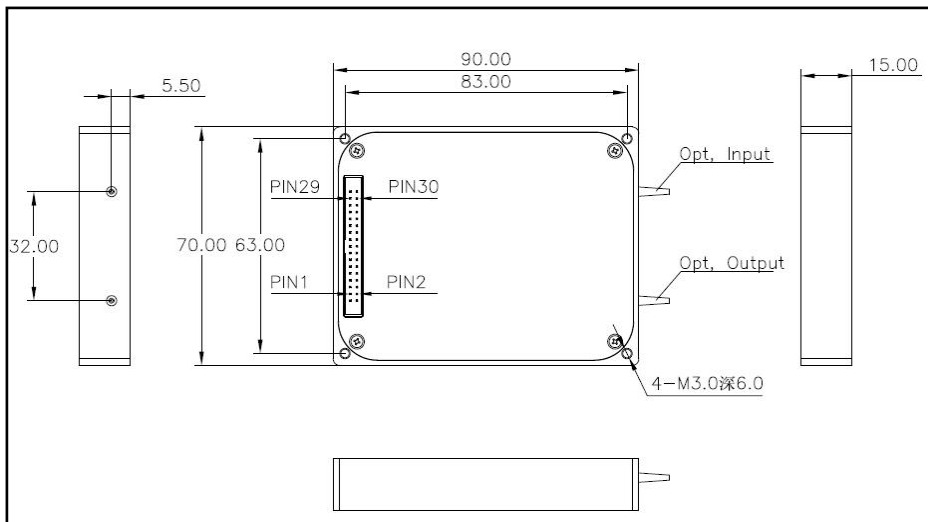
Order Information:



For example, part number SZK-M-C-23-20-FA-1.5 is an EDFA with module, C band, output power 23dB, gain 20dB, pigtail FC/APC, pigtail length 1.5m.

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

10 Bukit Batok Crescent #07-02 The Spire Singapore 658079 Tel:
<http://www.SintecOptronics.com> <http://www.sintec.sg> sales@sintec.sg



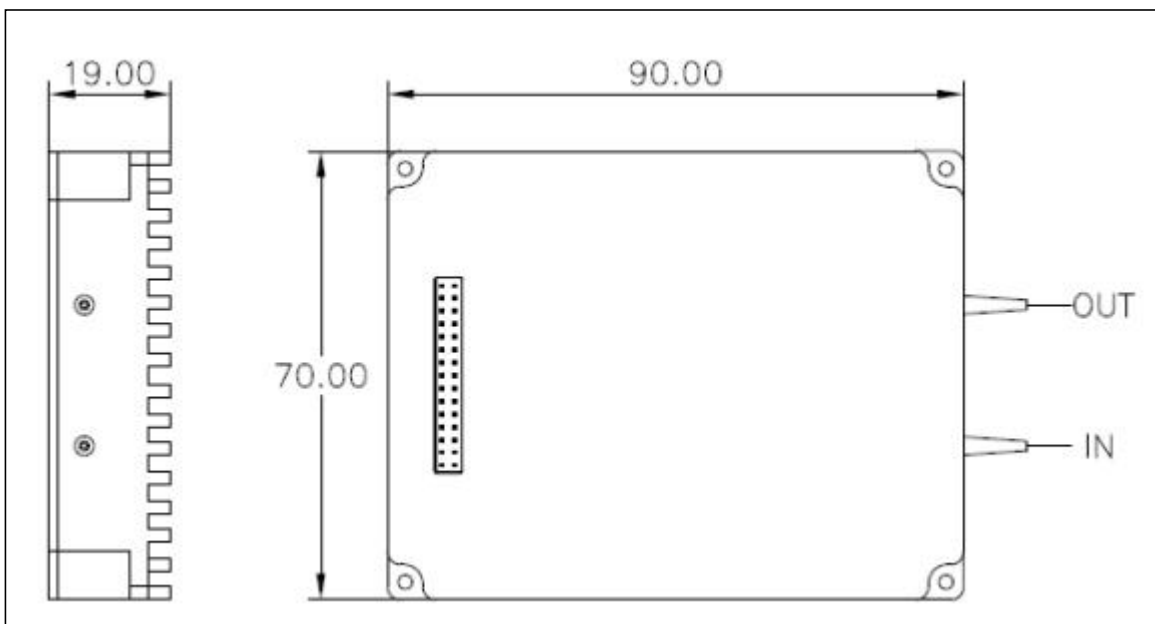
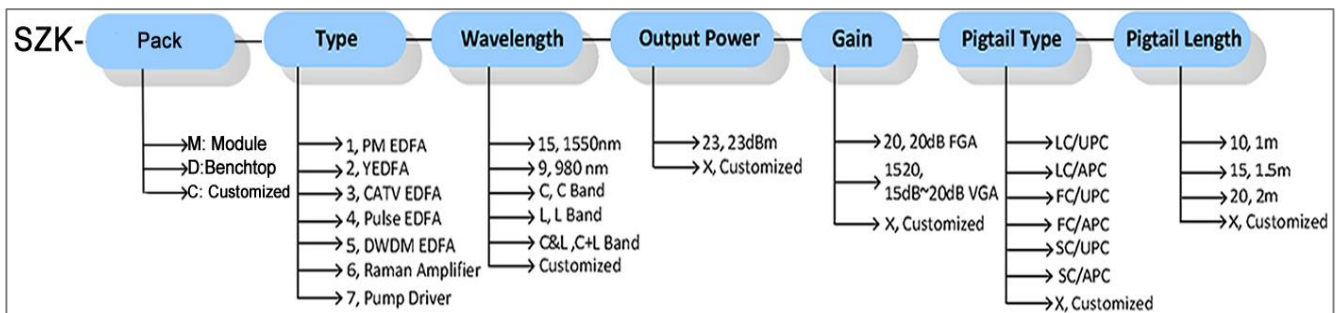
- Low noise figure and power consumption
- High stability and reliability
- Customizable

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

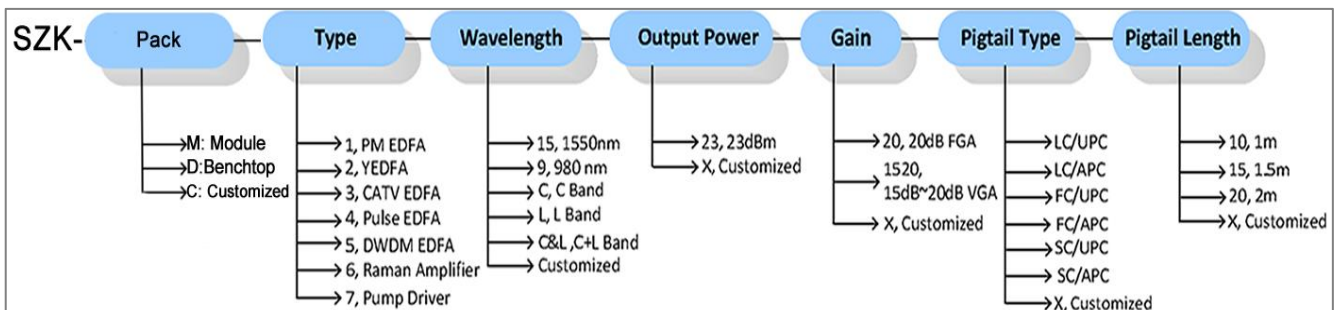
Main Application

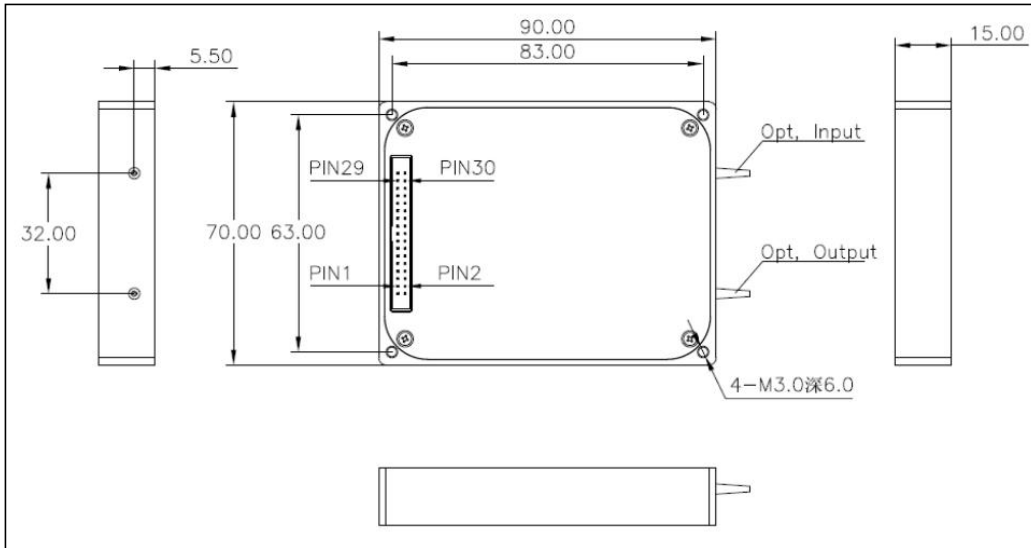
- Optical fiber sensing
- Test wind LIDAR
- Hydrophone system
- College and research institute



| 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

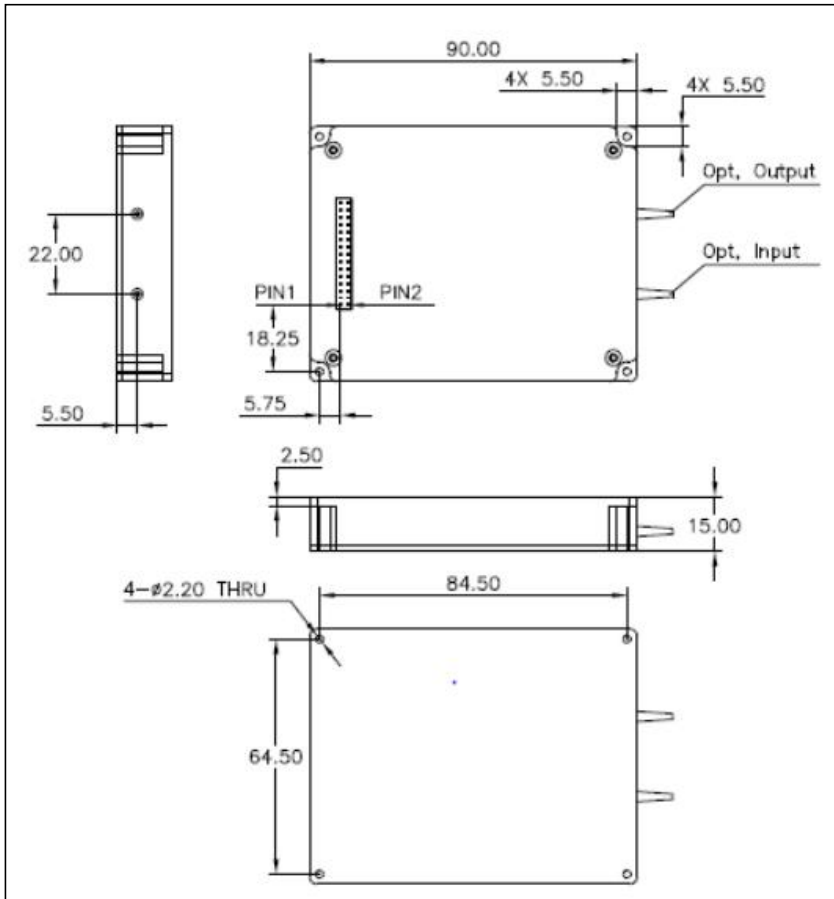
Main Application

- 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

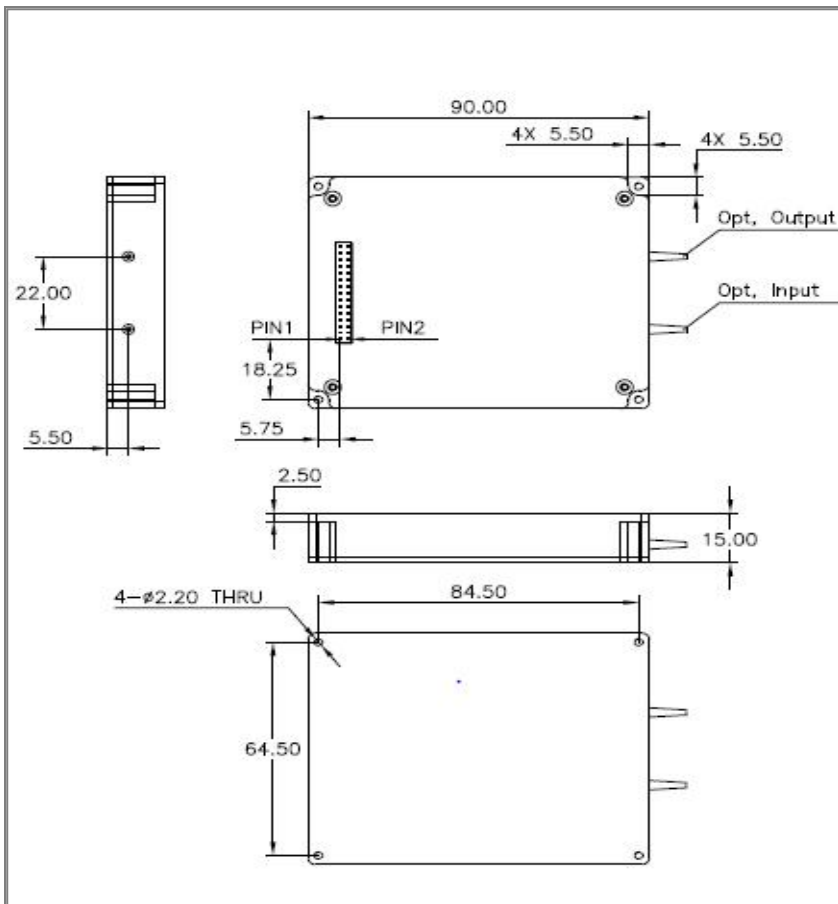
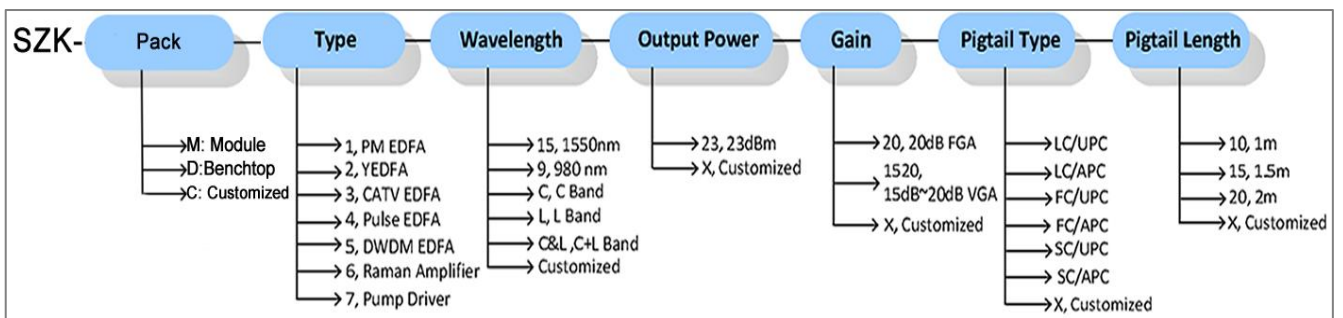
- Amplify c-band signal and l-band signal
- ACC/APC/AGC operation mode
- Low noise figure and power consumption
- High stability and reliability
- Customizable

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 line-width 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:

