

Sensing Modules



Standard EDFA Module

Beogold's low noise figure EDFA module is widely used in fibre optic sensing and telecommunications. It consists of a 980nm or 1480nm pump laser to provide energy and it operates in AGC, ACC or APC mode. Based on fine temperature control technology inside, it provides excellent temperature characteristics even under harsh working environment at the temperature of -20~60°C. It features high output power, a large gain, and a variable gain range >20dB. It can work across C-band and L-band meeting customers' diverse needs. It uses DC+5V/GND or DC+3.3V/GND as power supply, user-friendly RS232 serial port as communications interface to set module parameters, enabling real-time parameter monitoring and remote network management and control.

Beogold DWDM Solutions

Beogold's low noise figure EDFA module is widely used in fibre optic sensing and telecommunications. It consists of a 980nm or 1480nm pump laser to provide energy and it operates in AGC, ACC or APC mode. Based on fine temperature control technology inside, it provides excellent temperature characteristics even under harsh working environment at the temperature of -20~60°C. It features high output power, a large gain, and a variable gain range >20dB. It can work across C-band and L-band meeting customers' diverse needs. It uses DC+5V/GND or DC+3.3V/GND as power supply, user-friendly RS232 serial port as communications interface to set module parameters, enabling real-time parameter monitoring and remote network management and control.

Features

- High output power up to 23dBm
- Flexible control mode High stability and reliability
- Operating temp. -20~60°C
- Custom design output power and configuration

Applications

- Long haul optical fibre communication Dense Wavelength Division Multiplexing
- Fibre optic sensing
- Oil and gas field monitoring

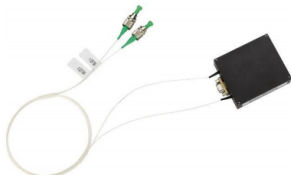
[Data sheet](#)

Manufacturer: Beogold

Product Code: BG-EDFA

Product SKU: 53839000007584170

Product SKU: Optical Amplifier, EDF, 1550nm



Mini EDFA Module

Beogold's mini EDFA module is widely used in optical fibre sensing and communications. It consists of a 980nm or 1480nm pump laser to provide energy and operates in AGC, ACC or APC mode. With fine temperature control technology inside, it provides excellent temperature characteristics even under harsh working environment at the temperature of -40~70°C. Beogold's EDFA provides high output power, a large gain, and a variable gain range >20dB. It can work across C-band and L-band meeting customers' diverse needs. It uses DC+5V/GND as power supply, user-friendly RS232 serial port as communications interface for easy internal configuration, enabling real-time parameter monitoring, and remote management and control of the line.

Beogold DTS Solutions

Beogold's mini EDFA module is widely used in optical fibre sensing and communications. It consists of a 980nm or 1480nm pump laser to provide energy and operates in AGC, ACC or APC mode. With fine temperature control technology inside, it provides excellent temperature characteristics even under harsh working environment at the temperature of -40~70°C. Beogold's EDFA provides high output power, a large gain, and a variable gain range >20dB. It can work across C-band and L-band meeting customers' diverse needs. It uses DC+5V/GND as power supply, user-friendly RS232 serial port as communications interface for easy internal configuration, enabling real-time parameter monitoring, and remote management and control of the line.

Features

- Low noise figure Flexible control mode High stability and reliability
- Customised optical output power Mini and compact package

Applications

- DWDM
- Military & defence Optical fibre sensing

[Data sheet](#)

Manufacturer: Beogold

Product Code: BG-EDFA-M4

Product SKU: 53839000007587168

Product SKU: Optical Amplifier, EDF, mini

[High Power EDFA Module](#)



Beogold's high-power EDFA offers an output optical power of up to 27dBm and is widely used in optical fibre sensing and communications. It consists of a 980nm or 1480nm pump laser to provide energy and operates in AGC, ACC or APC mode. It provides high output power, a wide spectral range, and a variable gain range >20dB. It can work across C-band. Using DC+5V/GND as power supply, user-friendly RS232 serial port as communications interface for easy internal configuration. Beogold's high power EDFA enables real-time parameter monitoring, and remote management and control of the line

Beogold DAS/DVS Solutions

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Features

- Low noise figure High output power up to 27 dBm
- Flexible control mode High stability and high reliability
- Operating temperature: -20~60°C
- Customisable optical output power and configuration

Applications

- BOTDR
- OTDR system
- LIDAR
- Nonlinear Optics researches Fibre optic sensing
- Air monitoring

[Data sheet](#)

Manufacturer: Beogold

Product Code: BG-HEDFA-

Product SKU: 53839000007587172

Product SKU: Optical Amplifier, EDF, module, high power



Raman EDFA Module

Beogold's Raman amplifier module can be used for optical signal amplification in ultra-long-haul and dense wavelength division multiplexing (DWDM) systems to increase transmission distance. The module uses multi-pump laser multiplexer technology to achieve flat gain, low-noise optical signal amplification across C-band through a combination of different types of pump lasers and fibre type. For laser

safety considerations, the module incorporates automatic shut-down mechanism, which automatically turns off the laser output when incidents, such as fibre breakage, line aging occur to ensure personal safety. The module has built-in drive circuitry and logic control circuitry to monitor key information such as pump laser temperature and module temperature in real time. All state parameters and configuration information can be flexibly adjusted and monitored by the upper computer control software. Default module state parameters can be provided according to specific order information and customer requirements. Module, table and rack mounted structures are available for different needs.

Beogold DWDM Solutions

Beogold's Raman amplifier module can be used for optical signal amplification in ultra-long-haul and dense wavelength division multiplexing (DWDM) systems to increase transmission distance. The module uses multi-pump laser multiplexer technology to achieve flat gain, low-noise optical signal amplification across C-band through a combination of different types of pump lasers and fibre type. For laser safety considerations, the module incorporates automatic shut-down mechanism, which automatically turns off the laser output when incidents, such as fibre breakage, line aging occur to ensure personal safety. The module has built-in drive circuitry and logic control circuitry to monitor key information such as pump laser temperature and module temperature in real time. All state parameters and configuration information can be flexibly adjusted and monitored by the upper computer control software. Default module state parameters can be provided according to specific order information and customer requirements. Module, table and rack mounted structures are available for different needs.

Features

- High output power High reliability and stability
- Excellent thermal adaptability: -20~60°C
- Module, desktop and rack mounted structures available
- Improved SNR

Applications

- Distributed Raman amplification Distributed fibre optic sensing
- Repeaterless long haul fibre optic communication
- 40G, 100G high-speed optical fibre communication systems

Data sheet

Manufacturer: Beogold

Product Code: BG-RAMAN

Product SKU: 53839000007587188

Product SKU: Optical Amplifier, EDF, module, Raman



Ultra-Narrow Linewidth Laser Source

Beogold's 1550nm ultra-narrow linewidth laser is a proprietary low-noise fibre laser source. The uniquely designed ultra-narrow fibre filter ensures single frequency operation of the laser. Its unique temperature control and anti-vibration design eliminates impact of changing external temperature and vibration, thus achieving a stable longitudinal single mode and single frequency output. The laser offers excellent performances. It features KHz-level linewidth, low frequency noise and intensity noise, and SMSR more than 50 dB. In addition, the uniquely designed high-strength package ensures that the fibre laser module can better adapt to changing environmental conditions, such as temperature, vibration and impact, achieving longitudinal single mode, free of mode-hops. Beogold's single-frequency narrow linewidth fibre laser source delivers output power up to 50mW and higher.

[Beogold DAS/DVS Solutions](#)

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Features

- Ultra narrow linewidth < 3kHz
- High output power
- Tuneable output power
- High stability and reliability
- Excellent thermal adaptability

Applications

- LIDAR, BOTDR, ϕ OTDR
- Hydrophone Distributed fibre optic sensing
- Non-linear research
- Coherent optical communication

[Data sheet](#)

Manufacturer: Beogold

Product Code: BG-NL

Product SKU: 53839000007587198

Product SKU: Laser Light Source, ultra-narrow linewidth



C-Band Pulsed EDFA Module

Beogold's high-speed pulsed erbium-doped fibre amplifier is widely used for high-speed optical fibre communications, all-fibre sensing applications. The pulsed EDFA module has built-in drive circuit and logic control circuit to monitor key information such as pump laser temperature, module temperature and signal gain in real time. The module is configured to work at automatic current control (ACC) mode. All module state parameters and configuration information can be flexibly adjusted and monitored by upper computer software

Features

- High output peak power
- High reliability
- Low noise figure
- Low pulse signal deformation
- Flexible control mode
- Excellent thermal adaptability

Applications

- BOTDR
- Space optic communication Laser ranging
- Non-linear optical research
- Distributed fibre optic sensing

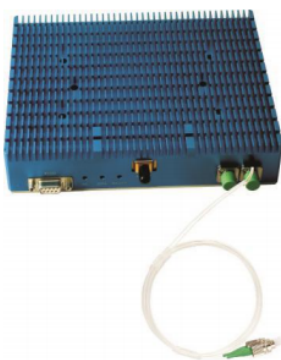
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Manufacturer: Beogold

Product Code: BG-PEDFA

Product SKU: 53839000007587208

Product SKU: Optical Amplifier, EDF, module, pulsed



DVS Integrated Optical Sensing Module

Beogold's DVS integrated optical module highly integrates inside our own proprietary ultra-narrow linewidth laser, pulsed EDFA, Raman amplifier, AOM and other optical components in single compact package. Combined EDFA and Raman amplification increases the sensing range of the DVS system and improves its signal to noise ratio. The module is specifically designed for DVS sensors and perimeter security systems.

Features

- High integration (UNL, EDFA, Raman, AOM)
- High reliability
- Compact package (190mmx150mmx40mm)
- Flexible control mode

Applications

- Distributed fibre optic sensing

- Non-linear research
- OTDR

Data sheet

Manufacturer: Beogold

Product Code: BG-UAER

Product SKU: 53839000007587222

Product SKU: Optical Sensor Module, DAS/DVS



DAS PIN and EDFA Detector

This PIN+EDFA module is designed for use in distributed fibre optic acoustic sensing systems (DAS). The DAS photodetector module integrates Beogold's own EDFA amplification technology with a unique signal noise processing circuit, combining multi-level interconnect amplification and noise suppression technology to improve signal-to-noise ratio and obtain high-quality output signals to subsequent data acquisition card. The detector module adopts DC+5V single power supply and it is highly integrated for convenient use. Beogold offers a wide range of DAS detector module for diverse applications

Beogold DAS/DVS Solutions

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Features

- High response speed
- Low noise output working temperature: -10~60°C
- Two-channel output
- High stability and reliability

Applications

- DAS fibre sensing
- Optic Fibre communication Lab research
- Passive components measurement and production

Data sheet

Manufacturer: Beogold

Product Code: BG-QII

Product SKU: 53839000007587232

Product SKU: Optical Sensor Module, DAS detector



DTS Integrated Optical Module

Beogold's DTS optical module integrates our own proprietary Raman source, WDM and APD detector inside. The pulsed laser output can be controlled via the upper computer software. The module, underwent rigorous environmental testing to ensure long-term reliability and stability, can be integrated directly into DTS system, making design more convenient for our customers.

Beogold DTS Solutions

Beogold's DTS optical module integrates our own proprietary Raman source, WDM and APD detector inside. The pulsed laser output can be controlled via the upper computer software. The module, underwent rigorous environmental testing to ensure long-term reliability and stability, can be integrated directly into DTS system, making design more convenient for our customers.

Features

- High integration (WMD, APD, Raman source)
- High peak, nanosecond pulsed laser output
- High stability and reliability
- Working temperature: -10°C~60°C

Applications

- DTS
- Laboratory & research
- Fibre optic sensing system

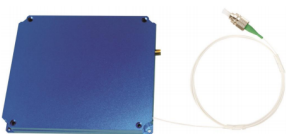
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Manufacturer: Beogold

Product Code: BG-DTS

Product SKU: 53839000007587242

Product SKU: Optical Sensor Module, DTS



DTS Raman Source

Beogold's DTS Raman source is widely used in DTS distributed temperature sensing systems, laser ranging, and fibre optic sensing systems. Its newly designed nanosecond pulse drive circuit provides stable pulse with small deformation and its optimised low-noise EDFA can achieve high peak nanosecond pulse output, which can be easily controlled via upper computer software. The module integrates pulse signal generator inside. It can also be triggered via an external signal.

Rigorous environmental testing ensures its long-term reliability and stability, making it ideal for OEM integration.

Beogold DTS Solutions

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Features

- High output peak power
- Operating temperature: -10~60°C
- Tuneable pulse width
- High stability and reliability

Applications

- DTS temperature measuring
- Laser ranging
- Lab research
- Fibre optic sensing system

[Data sheet](#)

Manufacturer: Beogold

Product Code: BG-DTSS

Product SKU: 53839000007587252

Product SKU: Laser Light Source, Raman