1550nm Erbium Doped Fiber Amplifier

MODEL: EDFA-1550S Serial

Product Overview

EDFA-1550S (Erbiur Doped Fiber Amplifer) is a representative one in the optical amplifier. As the EDFA's wavelength is 1550nm, it is in line with the low-loss band of fiber and its technology has been relatively mature, so widely used. Erbium-doped fiber is the core components of the EDFA, it makes quartz optical fiber as matrix material, and incorporate a certain proportion of rare earth element erbium ions (Er3 +) in the core of a fiber. When certain amount of pump light is injected into the erbium-doped fiber, Er3 + have been excited from the low-energy level to the high energy level, due to Er3 + has a very short lifespan on the high energy level, and soon transit to a higher level by the form of a non-radiative, and form the population inversion distribution between this energy level and low-energy-level. Because the energy between these two energy levels is exactly equal to the photon energy of 1550nm, stimulated emission of 1550nm light can only occur, we can only enlarge 1550nm optical signal.

This series of products adopt 980nm or 1480nm high linearity, optical isolation, the DFB, thermoelectric cooling DFB laser produced by JDSU, Fujitsu, Nortel, Lucent, Fitel and other world-renowned semiconductor companies as the pumping source. In the interior of the machine is equipped with the light power export stable circuit and laser Thermo electric cooling device Temperature stability control circuit to ensure optimal machine performance and long-life laser stability. The microprocessor software monitor the lasers' working state, the Digital Panel (VFD) displays the operating parameters. Once the laser operating parameters deviate from the permissible range set by the software, micro-processing will automatically turn off laser power, red light goes on to warn, digital panel prompts cause of troubles., a detailed report of the device parameters please read "instructions."

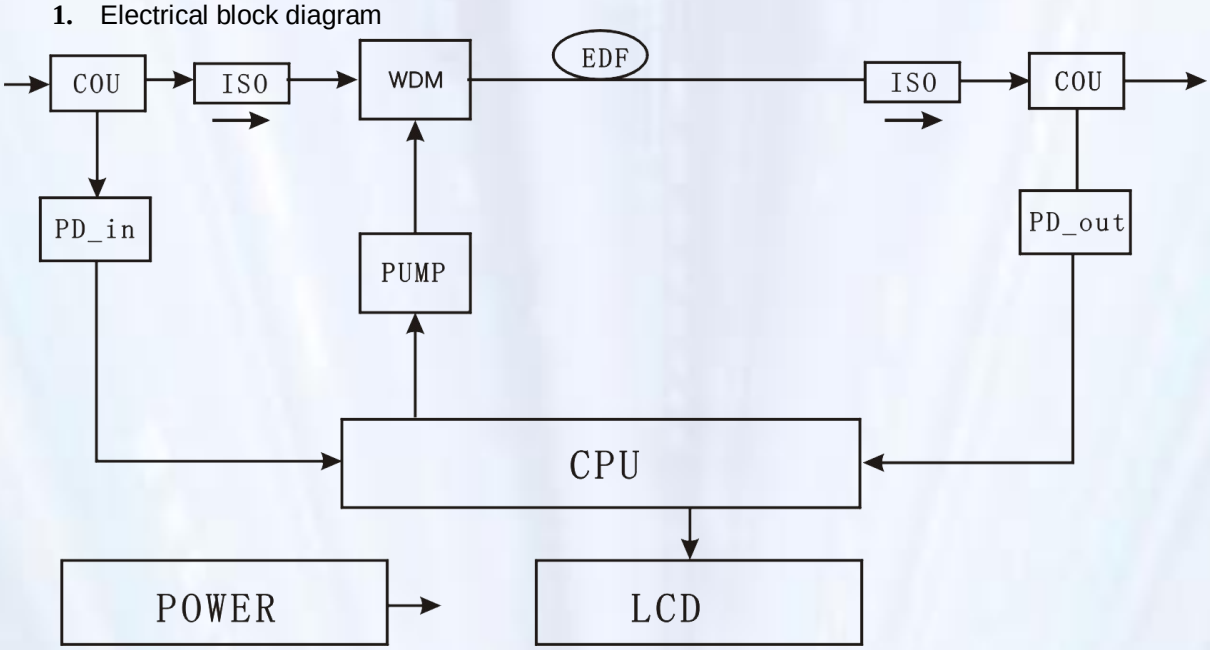
Features

- High quality: The former-class pump commonly use 980nm, after-class pump use 1480nm, power is legitimately optimized by software to minimize the NF of the EDFA, could be comparable with the so-called low-power optical amplifier. It can make the system to obtain superior CNR.
- Reliability: Reliability: The 19 "1U standard rack, built-in high-performance switching power supply, it can work at 85~265Vac City Network Voltage, As well as an optional DC48V power supply (reservations required); chassis cooling automatic temperature control.

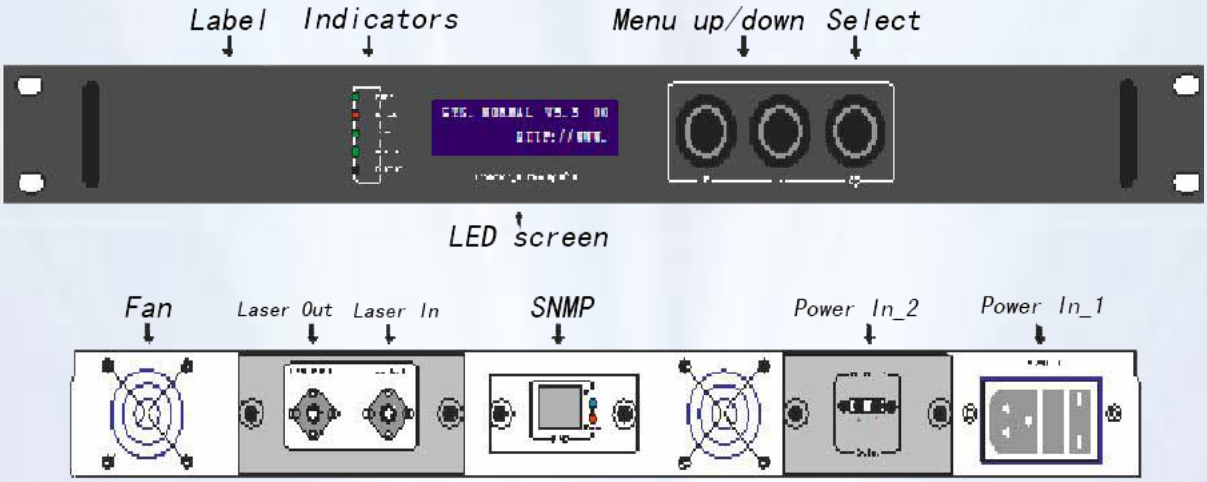
- Intuitive: The laser is the most expensive machine components, machine equipped with microprocessor monitors the working state of the laser, the panel LCD window displays the operating parameters.
- Network type: Select All-piece status monitoring transponder guarantee to meet the national standard and be compatible with the SCTE HMS standard, it enable network management monitoring capabilities.
- Power plug: Aluminum structure using plug switching power supply, allows for heat dissipation and replacement. And dual power supply hot and cold backup.
- Adjustable output power: Adjustable output power range (-3dB), the user specified when ordering.

Product structure diagram

1. Electrical block diagram



2. The EDFA front panel, back panel diagram



The main technical indicators

Item / Equipment type	EDFA-1550S
Wavelength (nm)	1545~1555
Optical Input Power (dBm)	-5~+10
Nominal Optical Input Power (dBm)	+3
NF(dB) (+3 dBm,@1550nM)	3.8~5.5
Gain Flatness (dB)	<±0.3
Optical Output Power Stability (dB)	<±0.5
Polarization Sensitivity (dB)	<0.2
Polarization Mode Dispersion (ps)	<0.5
Optical Connector (IN/OUT)	FC/APC
Working Pump Quantity (N)	1~3
Saturated Output Power (dBm)	13~26
Power Source (Vac)	115~265
Power Source (Vdc)	48
Working Temperature (°C)	0~50
Size(mm)	482.6×387×44

Information Order

EDFA-1550S -13	output power, ≥13dBm (20mW)
EDFA-1550S -14	output power, ≥14dBm (25mW)
EDFA-1550S -15	output power, ≥15dBm (32mW)
EDFA-1550S -16	output power, ≥16dBm (40mW)
EDFA-1550S -17	output power, ≥17dBm (50mW)
EDFA-1550S -18	output power, ≥18dBm (63mW)
EDFA-1550S -19	output power, ≥19dBm (80mW)
EDFA-1550S -20	output power, ≥20dBm (100mW)
EDFA-1550S -21	output power, ≥21dBm (125mW)
EDFA-1550S -22	output power, ≥22dBm (160mW)
EDFA-1550S -23	output power, ≥23dBm (200mW)
EDFA-1550S -24	output power, ≥24dBm (250mW)
EDFA-1550S -25	output power, ≥25dBm (320mW)
EDFA-1550S -26	output power, ≥26dBm (400mW)