Fiber Amplifier (EDFA&YDFA)

Features

- Low noise
- ACC, AGC, APC Option
- SM and PM fiber Option
- Automatic shut off pump protection
- Remote control
- Desktop, module package are optional

Applications

- Optical fiber sensing system
- Optical fiber communication system

Parameters

Parameter	Unit	Pre-release type EDFA	Amplifier type EDFA	High power EDFA	YDFA
Operating wavelength range	nm	1525- 1565			1050-1100
Input minimum optical power	dBm	-40	-10	-10	-3
Saturated output optical power	dBm	0	17/20/23	30/33/37	30/33
Noise figure	dB	4.5	5.0	5.5	5
Input optical isolation	dB	30			
Output optical isolation	dB	30			
Fiber type		SMF-28 or PM			HI1060
Output connector		FC/APC			
Dimensions L x W x H	mm	Module:90*70*18		Module:150*125*20	
		Desktop: 320*220*90			

An optical amplifier is a device which receives some input signal light and generates an output signal with higher optical power. Typically, inputs and outputs are laser beams (very rarely other types of light beams), either propagating as Gaussian beams in free space or in a fiber. The amplification occurs in a so-called gain medium, which has to be “pumped” (i.e., provided with energy) from an external source. Most optical amplifiers are either optically or electrically pumped.
Different kinds of amplifiers differ very much e.g. in terms of saturation properties. For example, rare-earth-doped laser gain media can store substantial amounts of energy, whereas optical parametric amplifiers provide amplification only as long as the pump beam is present. As another example, semiconductor optical amplifiers store much less energy than fiber amplifiers, and this has important implications for optical fiber communications.

Applications of Optical Amplifiers
Typical applications of optical amplifiers are:

An amplifier can boost the (average) power of a laser output to higher levels (→ master oscillator power amplifier = MOPA).
It can generate extremely high peak powers, particularly in ultrashort pulses, if the stored energy is extracted within a short time.
It can amplify weak signals before photodetection, and thus reduce the detection noise, unless the added amplifier noise is large.
In long fiber-optic links for optical fiber communications, the optical power level has to be raised between long sections of fiber before the information is lost in the noise.