

# 27-33dBm High Power Polarization Maintaining Fiber Amplifier Rack

## ►► Description

YEDFA-PM-SO series of high power polarization maintaining fiber amplifiers are designed to output optimal optical performance with high reliability and stability. These amplifiers are especially developed for PM transmission, sensors and LIDAR applications.

This line of PM high power fiber amplifiers features a dual stage amplification configuration, pre-amplifier and power amplifier, the use of selected components with extremely high PER and low EL values, and the careful management of splice joints to preserve polarization. Both input and output signals are sampled and monitored with a feedback circuit to protect the amplification system. APC (automatic power control), AGC (automatic gain control) and ACC (automatic current control) circuits are designed into the amplifier to ensure high stability and reliability of output power. Standard user-friendly Ethernet or RS-232 network interface enables reliable connectivity with customer's network management system.

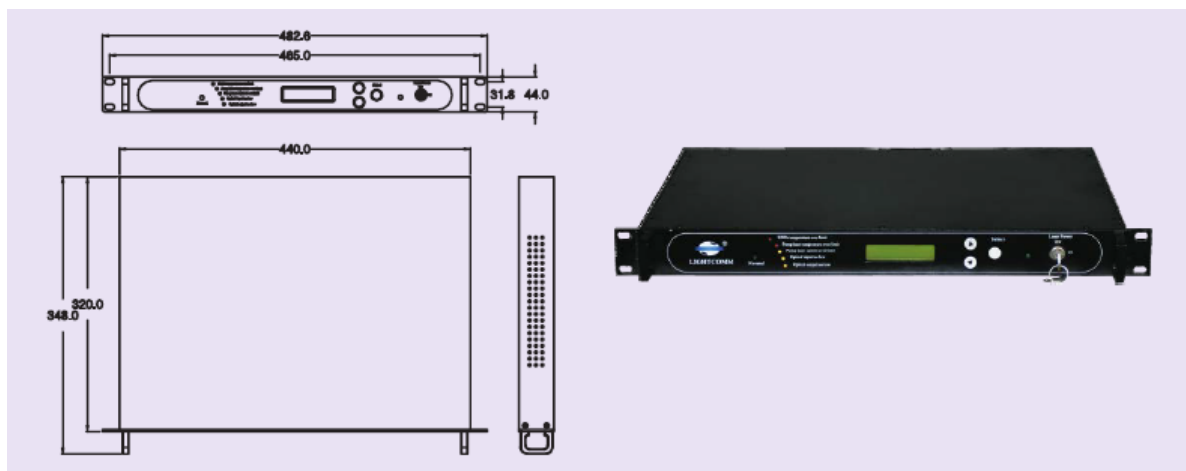
## ►► Features

- High polarization extinction ratio
- Low noise figure
- RS-232 or Ethernet interface
- Highly reliable laser diode pumps
- High stability and reliability based on multi-mode pump and PM fiber combining technology

## ►► Applications

- LIDAR & Sensor
- Test and Measurement
- Coherent synthesizing & Spectrum synthesizing
- Frequency conversion
- Microwave optics
- Booster amplifier for PM transmitters

## ►► Typical Mechanical Structure



Mechanical Outline: 19-in 1U Rack



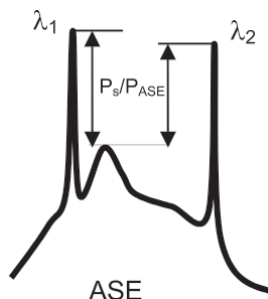
## ►► Specifications:

### Optical Characteristics

| Parameter                     | Unit | Typ.       |     |     | Notes  |
|-------------------------------|------|------------|-----|-----|--|
| Operating Wavelength          | nm   | 1543~1565  |     |     | Other wavelength upon request. Refer to illustration below |
| Output Power                  | dBm  | +27        | +30 | +33 |  |
| Input Power                   | dBm  | -10 ~+10   |     |     |  |
| Polarization Axis             |      | Slow axis  |     |     |  |
| Polarization Extinction Ratio | dB   | >17        |     |     |  |
| Noise Figure                  | dB   | <7.0       |     |     | Pin=0dBm@1550nm  |
| Control Mode                  |      | Selectable |     |     | APC/ACC/AGC  |
| Output Return Loss            | dB   | 40         |     |     |  |
| Connector Type                |      | SC/APC     |     |     | Other type upon request                                    |

### Electrical & Environmental Characteristics

| Parameter                   | Unit | Typ.   |  |  | Notes           |
|-----------------------------|------|--|--|--|-----------------|
| Interface Type              |      | RS 232 or Ethernet   |  |  |                 |
| Power Supply                | V    | 220  |  |  | 110~240@50-60Hz |
| Power Consumption           | W    | <60  |  |  |                 |
| Alarms                      |      | Case temperature over limit ; Pump laser temperature over limit;<br>Pump laser current over limit ; Optical input too low ; Optical output too low |  |  |                 |
| Operating Temperature Range | ℃    | -5 to 55   |  |  |                 |
| Storage Temperature Range   | ℃    | -20 to 70  |  |  |                 |
| Humidity                    | %    | 10 to 90   |  |  |                 |
| Dimensions (W*D*H)          | mm   | 482.6x320x44   |  |  | 19-in 1U rack   |
| Cooling                     |      | Conductive via surface & Fans  |  |  |                 |



Operation wavelength range:  $\Delta\lambda = \lambda_2 - \lambda_1$

Operation wavelength range depends on the output signal power ( $P_s$ )/ASE peak power ( $P_{ASE}$ ). With low input power,  $P_s/P_{ASE}$  is small and the operation wavelength is relative narrow.

Operation wavelength is adjustable according to amplifier configuration. Full specification review is recommended.

## ►► Order Information:

YEDFA-PM-SO-XX-XX/XXX-X

- Interface Type: 0-RS232, 1-Ethernet (SNMP)
- Connector Type: SC/APC, FC/APC etc.
- Output Power: 27, 30, 33dBm