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C-Band High-power SM Booster EYDFA

User Manual

P/N: EDFA-11x111xxxxxxx

Version: 2025-3

1 Introduction

This EYDFA is an optical gain module offering compact design, cost-reduced amplification of optical signal for a variety of applications. An electronic control circuit is integrated inside the module. The default operating mode is automatic Power Control.

2 Features

- Compact package
- High reliability
- High output optical power with low noise figure
- Low power consumption.

3 Typical Applications

- Metro and Access networks
- Single-channel optical communication network
- CATV system
- Optical fiber sensing

4 Specifications

Parameter	Min.	Typ.	Max.	Unit
Operating Wavelength	1535 - 1565			nm
Input Power	-5		10	dBm
Total Output Power	23		40	dBm
Noise Figure (Pin=0dBm, 1550nm)			6	dBm
Input/Output Return Loss	40			dB
PDG			0.5	dB
PMD			0.5	ps
Fiber (input/output)	SMF-28			
Supply Voltage	DC 12			V
Power Consumption			40	W
Operating Temperature	-30		70	°C
Storage Temperature	-40		85	°C
Relative Humidity (non-condensation)	5		95	%

5 Electronic Connector Pin Assignment

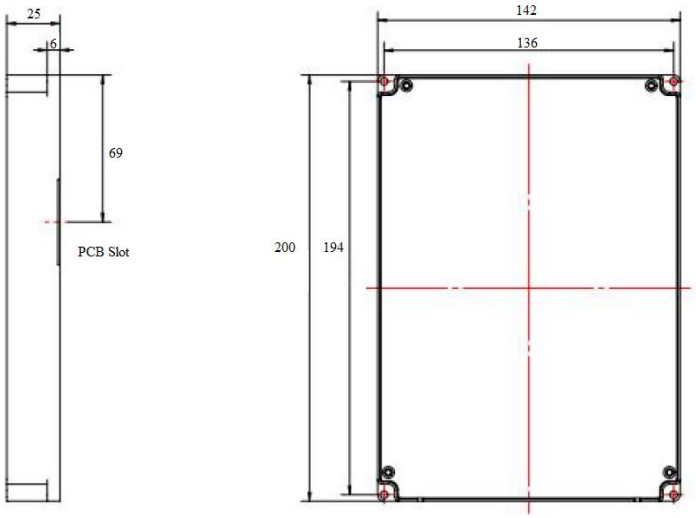
Power supply（The pin interval is 5mm）

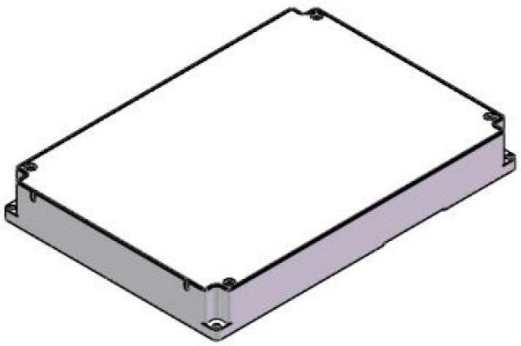
Pin	Description
1	GND
2	+12V

Communication（The pin interval is 2.54mm）

Pin	Description
1	NC
2	GND
3	RX
4	NC
5	NC
6	NC
7	TX
8	NC

6 Dimensions





7 Application Notes

- Avoid electrostatic discharge (ESD), which will cause damage of PCBs.
- Make sure tight contact between EYDFA and adaptor PCB (for communication and power ports).
- Avoid short-circuit between pins of the adaptor PCB or to ground.
- Make sure 12V DC power supply is free of spike.
- RS232-to-USB converting needs to be done by user. FTDI chip is recommended.

  * Benchtop is available at https://agiltron.com/.
- Install FTDI driver on host computer.
- Upon accomplishment of the above steps EYDFA can be remotely controlled by UART commands or the 'EDFA GUI' program (EDFA-M option) provided.
- Heatsink must be installed for this high-power EYDFA, as shown below.