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C/L-Band High-Power SM/PM EYDFA

User Manual

P/N: EDFA-1(2)C(1,L)x111xxxxxxx

P/N: EDFA-A(B)xx1(2)1xxx

(Oct, 2026)





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

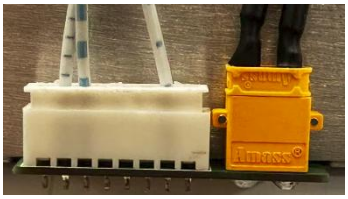
4 Specifications

Parameter	Min.	Typ.	Max.	Unit
Wavelength (C-band)	1535-1567			nm
Wavelength (L-band)	1570-1625			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
Supply Voltage	DC 12			V
Power Consumption			40	W
Operating Temperature	-5		50	°C
Storage Temperature	-25		75	°C
Relative Humidity (non-condensation)	5		95	%

5 Electronic Connector Pin Assignment

Power supply（The pin interval is 5mm）

Pin	Description
1	+12V
2	GND



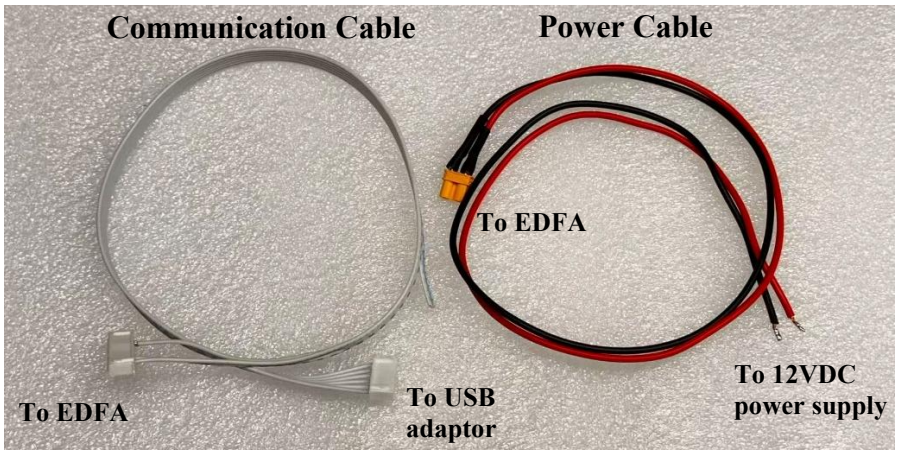
1 8 +12V GND

Communication（The pin interval is 2.54mm）

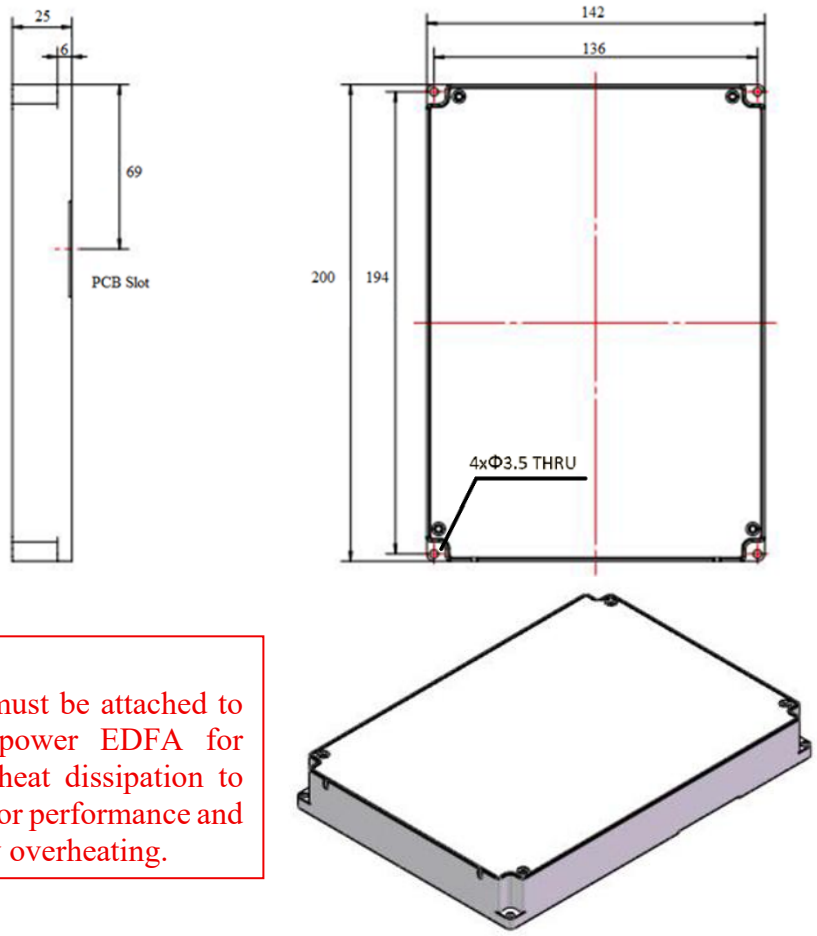
Pin	Name	Type	Description
1	NC	F	
2	GND	P	
3	RX1	I	LVTTL
4	RX2	I	LVTTL
5	Safety interlock	I	High: unlock pump Low: force pump off
6	TX2	O	LVTTL
7	TX1	O	LVTTL
8	Pump status	O	High: pump on Low: pump off

F: floating P: power I: input signal O: output signal

* TX and RX must work in pair, i.e. TX1 with RX1, and TX2 with RX2.



6 Dimensions



Note:
Heatsink must be attached to this high-power EDFA for sufficient heat dissipation to prevent poor performance and damage by overheating.

7 Software Instruction

Note:

USB to COM driver for FTDI devices needs to be installed on the computer for remote control. The driver can be downloaded from https://ftdichip.com/drivers/vcp-drivers/.

1) Download GUI software 'EDFA GUI V3.0' from the link below, under Step File/GUI tab.

https://agiltron.com/product/fiber-optical-amplifier-edfa-1540-1565nm-high-power/

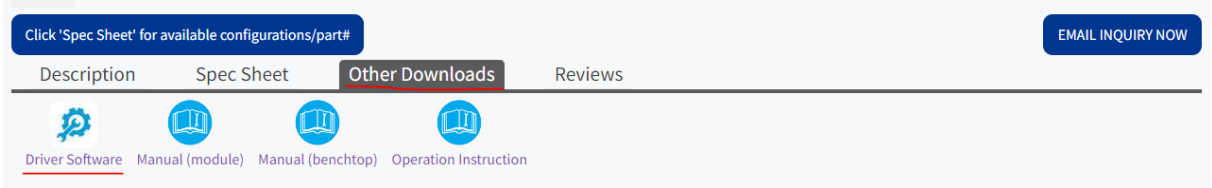


Figure 1: Driver download link

2) Unzip the file and run setup.exe to install the GUI on host computer.
3) Turn on Emission on the front panel of the EDFA to power up the whole unit and enable USB functions.
4) Run EDFA GUI V3.0.
5) Choose device model EDFA-M
    - EDFA-H: standard version EDFAs with 30dBm or higher output power.
    - EDFA-L: standard version EDFAs with less than 30dBm output power.
    - **EDFA-M: standard M511 EYDFAs with 23-40dBm output power.**
    - EDFA-C: high-end or special version EDFAs.

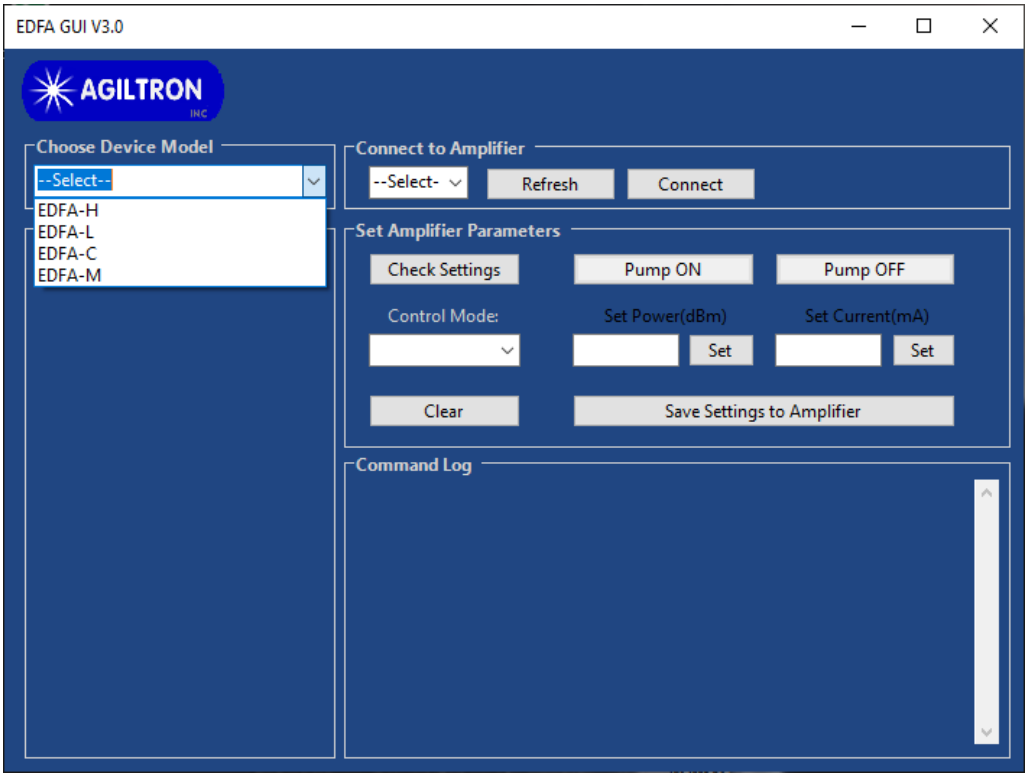


Figure 2: Remote control software: model selection

6) Port Selection:

    Select the serial port, to which the EDFA is connected, from the 'Port List', and click 'Connect'. If the desired port doesn't show up click 'Refresh' button and try again.

7) Click 'Connect' button to build the connection between computer and the EDFA.
8) Once EDFA has been connected successfully the status of the EDFA will be displayed in Monitor Status window. The status keeps updating at an interval of 1 second.
9) Check Setting

    Click to get the settings from the EDFA.

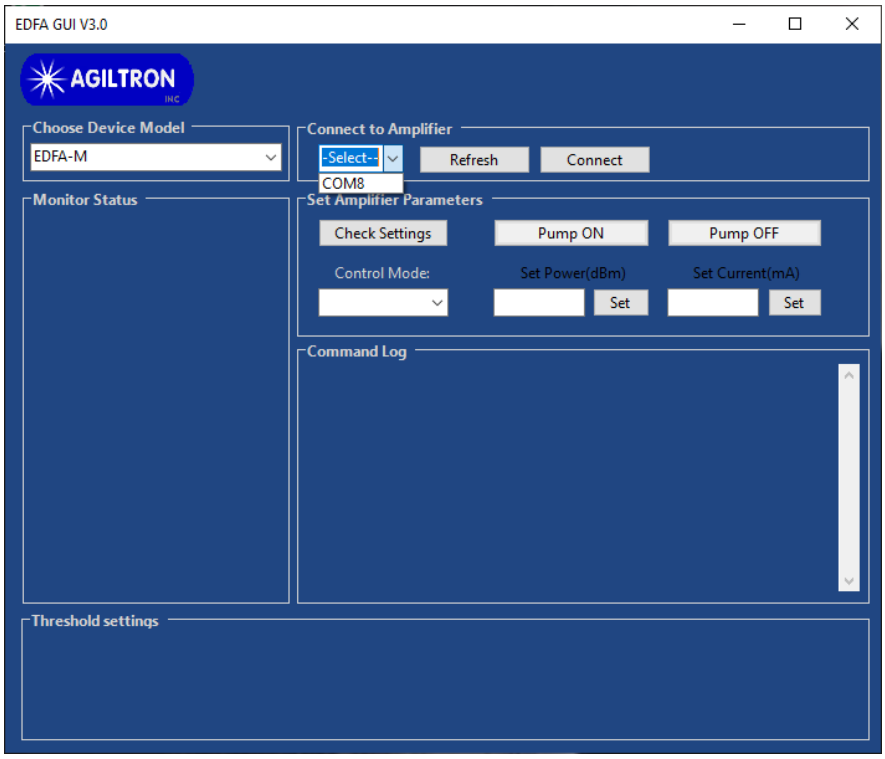


Figure 3: Remote control software: COM port selection.

10) Pump ON/OFF

Click to turn on/off the EDFA pump laser, thus to turn on/off its output.

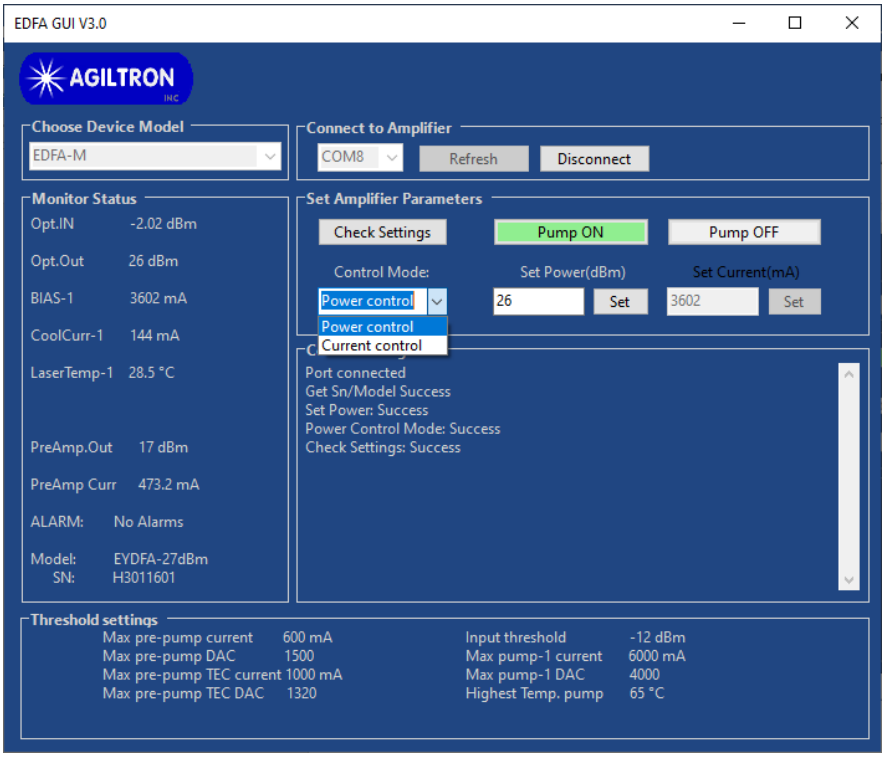


Figure 4: Remote control software: control mode selection

11) Control Mode Selection

Click ‘Control Mode’ button to get the current mode setting of EDFA.

- Power Control: constant power control mode
- Current mode: constant current control mode

Select the desired mode and input setting value into the corresponding ‘Set Power(dBm)’ or ‘Set Current(mA)’ box, then click ‘Set’ button.

12) Save Settings

Each time when either ‘Set’ button is clicked all current settings will be saved to EDFA.

When turn on the EDFA next time it will run under saved settings, even without GUI connection.

13) Emission ON/OFF

Click ‘Pump ON’ or ‘Pump OFF’ button to turn on/off the output of EDFA.

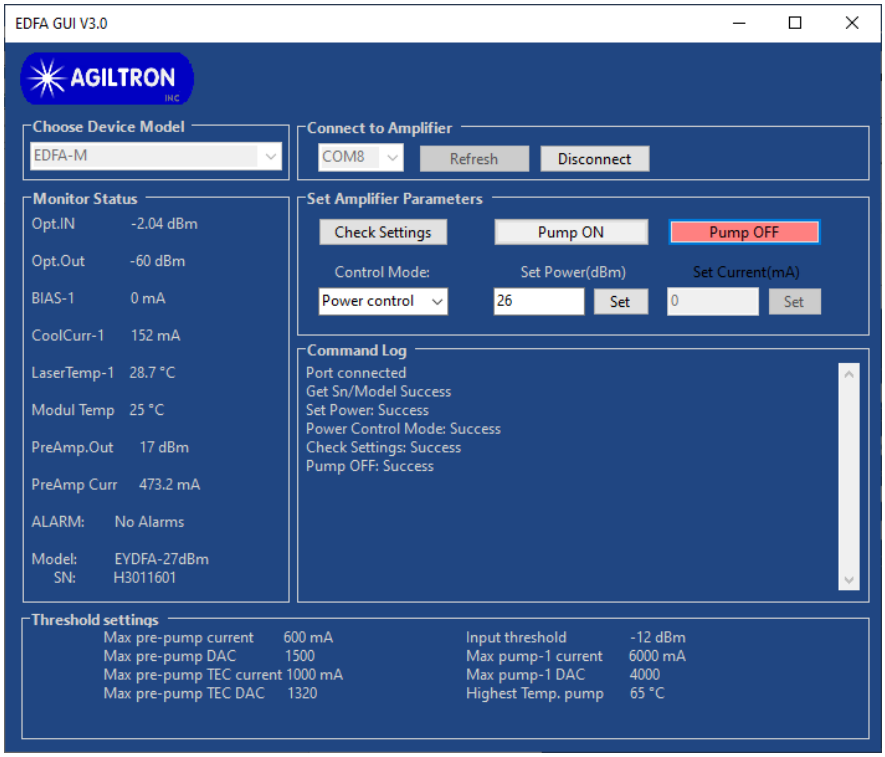


Figure 5: Remote control software: output is turned off.