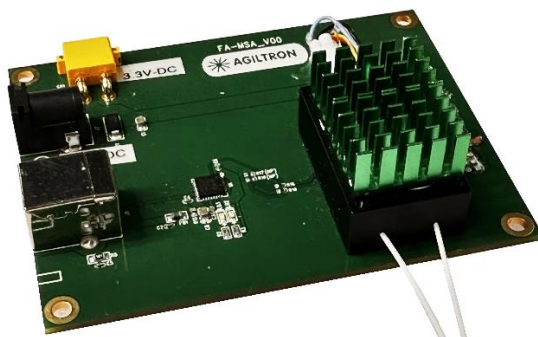


Full C-Band Mini Booster EDFA PCB-Mounted

User Manual

P/N: MEDF-1Cx1xxxxx

Version: 2025 - 3



1 Ambient Parameters

Parameter	Min.	Typical	Max.	Unit	Note
Working Temperature	-25		55	°C	
Storage Temperature	-55		85	°C	
Working Relative Humidity	5		85	%	40°C non-condensation
Storage Relative Humidity	5		95	%	

2 Optical Parameters

Parameter	Min	Typical	Max	Unit	Note
Module Dimension	(W x L x H) 34 x 22 x 11			mm	
Working Mode	APC/ACC				
Output power stability	-	-	±0.1	dB	
Accuracy of power reporting	-	-	±0.5	dB	
Gain control accuracy	-	-	±0.5	dB	
Output Power control accuracy	-	-	±0.5	dB	
Input & Output Isolation	-	35	-	dB	
In & Out Pump Leakage	-	-	-30	dBm	
Return Loss	45	-	-	dB	
PDG	-	-	0.3	dB	
Operating Wavelength	1528	-	1565	nm	
Input Power Range	-15	-12	5	dBm	
Max Output Power	18	dBm			
NF	-		5.5	dB	
Input & Output Fiber	SMF-28e, 900um white loose tube				
Output Fiber Length	99	100	101	cm	100 ± 1cm, without connector
Input Fiber Length	99	100	101	cm	100 ± 1cm, without connector
Input & Output Fiber Connector Type	FC/APC				

3 Electrical Parameters

3.1 Power Supply:

Parameter	Min	Typical	Max	Unit	Note
Voltage	3.15	3.3	3.45	V	
Current	-	-	1.0	A	
Power Consumption	-	-	3.45	W	

3.2 Ports

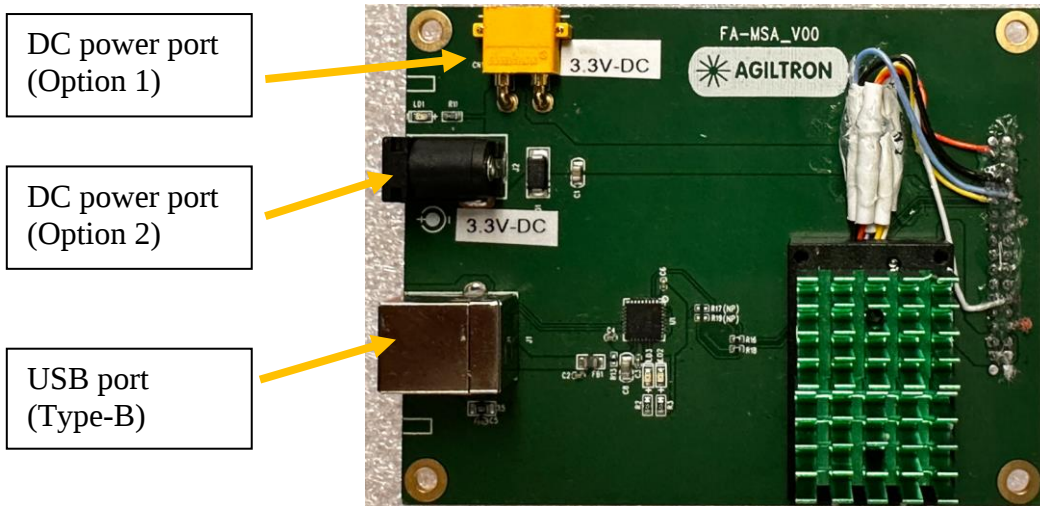


Figure 1 Ports of PCB

4 Mini EDFA Dimensions

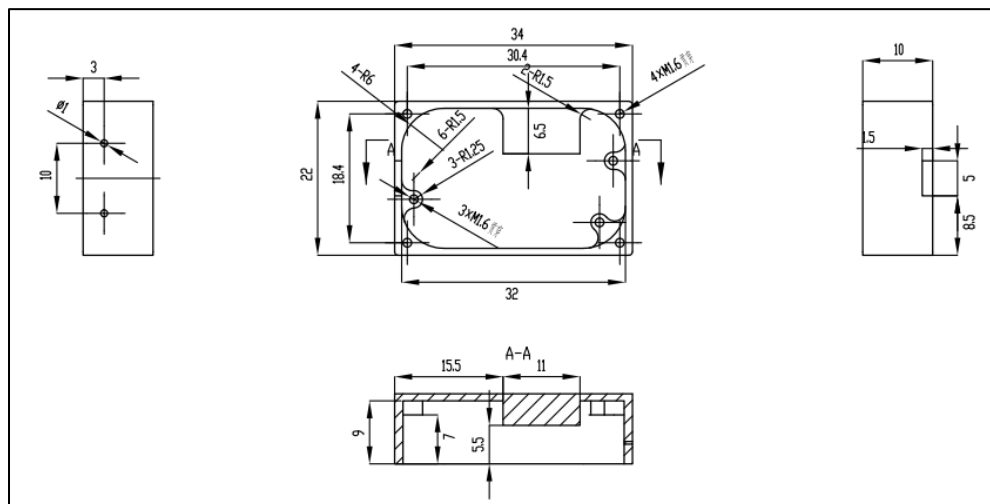


Figure 2 Drawing of mini EDFA

5 Connection and Operation

Warning

The PCB, on which mini EDFA is mounted, cannot be put on conductive surface, like metal plate, to avoid short-circuit.

- 1) Install GUI on a computer
- 2) Connect mini EDFA PCB to host computer by using a USB cable.
- 3) Connect 3.3VDC power supply to one of the power ports on PCB, Option 1 or Option 2.

Warning

When PCB is powered on up power to 18dBm will be output in optical fiber marked 'Output'.

- 4) Run EDFA GUI on host computer, and adjust output power or driving current of mini EDFA to desired value.

See Part 6 for GUI details.

- 5) When need to turn off mini EDFA, disconnect GUI from mini EDFA first, then power off mini EDFA by unplugging its DC power supply.

6 Remote Control

6.1 Serial Port Communication Protocol

Parameter	Value	Unit
Baud rate	9600	Bit/s
Data bit	8	Bit
Stop bit	1	Bit
Parity bit	None	

6.2 GUI Instruction

- 1) A copy of GUI can be found in the USB flash drive coming with EDFA.

It can also be downloaded from the link below, under Step File/GUI.

<https://agiltron.com/product/erbium-doped-fiber-amplifier-module/>



- 2) Run setup.exe to install the GUI on host computer.

- 3) Run EDFA GUI V3.0 on host computer.
- 4) Choose device model **EDFA-T**.

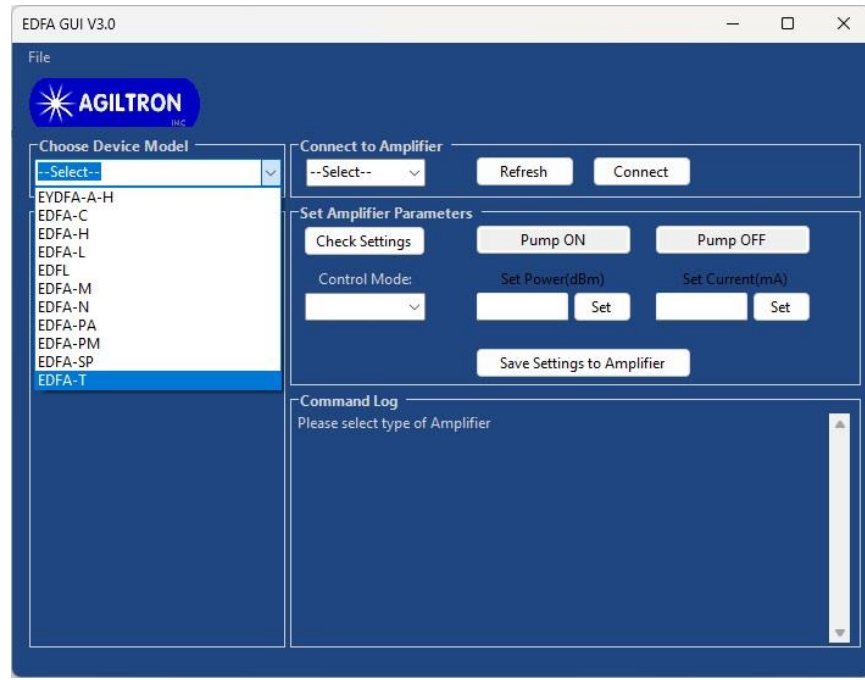


Figure 3 GUI – Model selection: EDFA-T

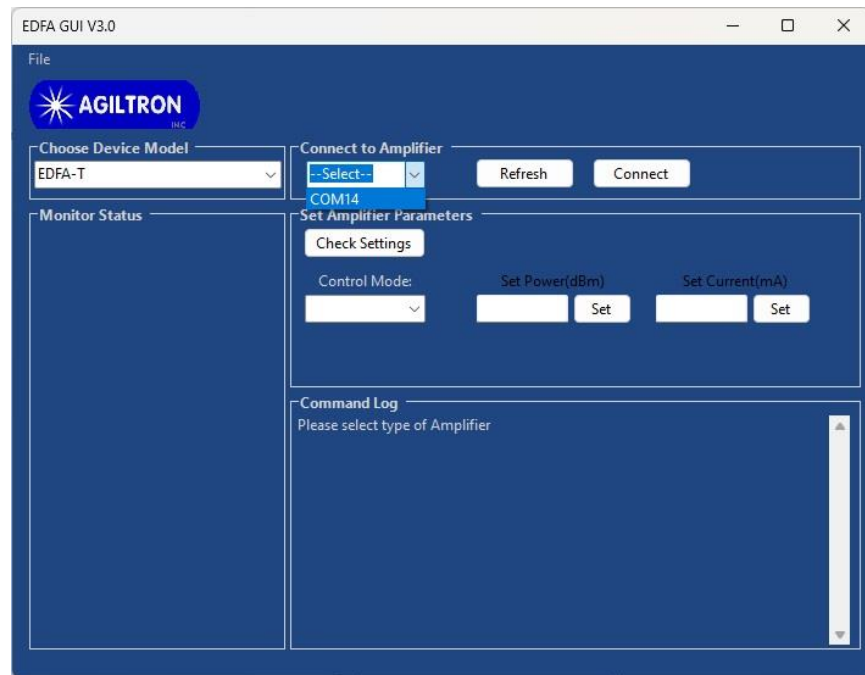


Figure 4 GUI – COM Port selection

- 5) 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.

- 6) Once EDFA has been connected successfully its status will be displayed in Monitor Status window. The status keeps updating at an interval of 1 second.

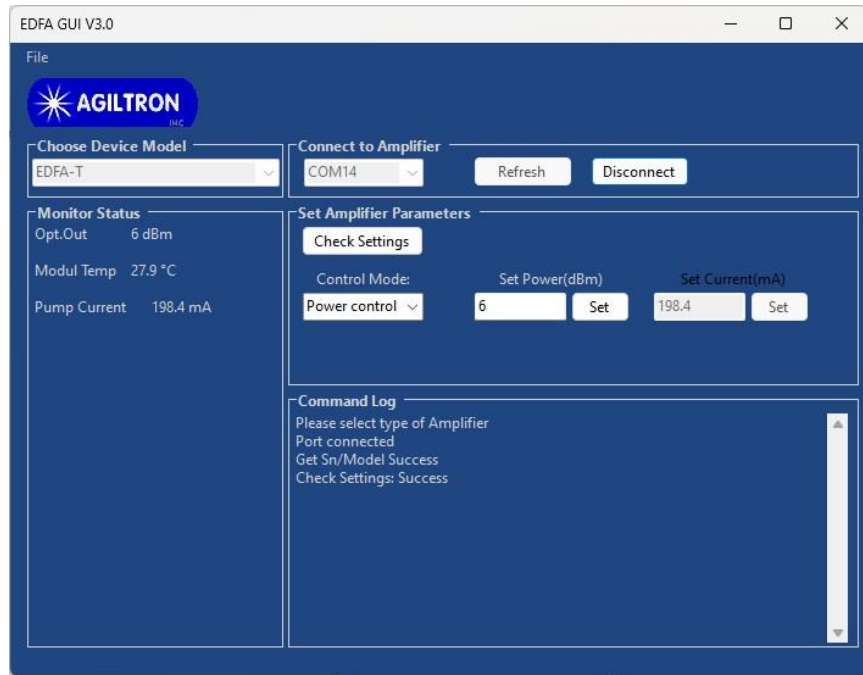


Figure 5 Remote control software: connected successfully.

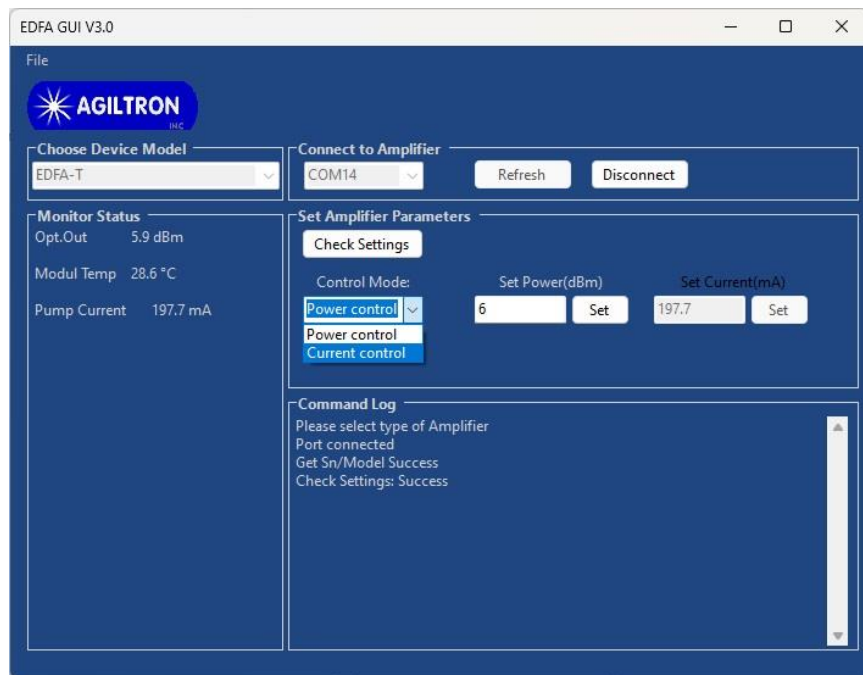


Figure 6 Remote control software: control mode selection

- 7) Check Setting
Click to get the settings from the EDFA.
- 8) 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)', 'Set Current(mA)', or 'Set Gain (dB)' box, then click 'Set' button.

9) Save Settings

When power or current setting is changed by user the setting will be saved to EDFA automatically.

When power on EDFA next time it will run at saved settings even without GUI control.

10) Disconnection

Click 'Disconnect' button to disconnect host computer from EDFA.