

Bench-top High-Power C/L/C+L Band SM/PM ASE Light Source

User Manual P/N: ASES-xxxx22xxx

Version: 2026-3



Warning

When Emission Button is pushed down the output of ASE light source will be on at the power level previously set at factory. This power level can be changed through provided GUI.

Warning

For ASE light source output power higher than 30dBm/1W one of the two options of output fiber below is required.

- A pair of fiber optic patch cables with matched high-power connectors
- Splicing of two matched fiber optic cables

Fail to do so will cause severe damage to output fiber, even to ASE light source.

Warning

All fiber connectors need to be cleaned and inspected before connecting them to the output of ASE light source.

Fail to do so might cause poor performance of ASE light source, or severe damage to fiber and ASE light source.

1 Warning

- 1) Only single mode fiber (SMF, 9/125 μ m for SM version, and PM1550 for PM version) cable is compatible to this ASE light source.

For fiber cables with high-power connectors, their MFD (mode field diameter) must match that of ASE output high-power connector.

Using of other fiber cables, including multimode fiber cables and single-mode fiber cables with different core size, unmatched connector, may cause poor performance or even damage to the ASE light source.

- 2) Only connectors as indicated on the front panel are allowed, such as FC/APC, SC/APC, etc.
- 3) Clean and inspect connectors and fiber ends prior to installation.
- 4) Use only industry approved methods, materials, and solutions for cleaning.
- 5) Always turn off the ASE light source prior to plugging/unplugging fiber cable. Failure to do so may cause permanent damage to the ASE light source.

2 Summary

The ASE light source works in C- and/or L-band. Its front and rear panels are shown in Figure 1.



Figure 1: Front and rear panels of ASE light source

Front Panel

- **Turn Key**

Switch ON/OFF the power of pump circuit.

Note:

When it is OFF USB functions are disabled.

- **Power Indicator**

Will be lighted up in solid green when the power of pump circuit is on.

- **ASE Output**

The fiber connector on its front panel is for ASE output. SMF-28 or PM1550 optical fiber cables are required for this model.

- **Emission Enable Button**

Enable or disable the output of ASE. Push it down to enable ASE output, and push it one more time to release it thus to disable ASE output.

OFF: Dark

ON: Lighted up in blue

Note:

a. ASE output will be enabled when the following status is met.

- 1) AC power: on
- 2) Turn key: at 'On' position
- 3) GUI setting: 'Pump On'

- 4) Interlock: shorted
 - 5) Emergency button: pulled up.
 - 6) Emission button: pushed down and lighted up in solid blue.
- b. This ASE light source is designed to work between -10 ~ 60°C temperature range. Humidity should not exceed 90%. Installation is recommended in a temperature & humidity controlled, dust-free environment.
- **Emergence Push Button**
In case of emergence push it down to disable ASE output.
To resume ASE output turn it clockwise.

Rear Panel

- **Power Connector**
This module needs 100-240V AC power. Its on-off power switch locates on rear panel.
- **USB Control**
The type-B USB port is for remote control.
The RS232 port is not functional for this model.
- **Emission Status Monitor**
The BNC connector on rear panel is for output of monitor signal of emission status. Its output can drive an external LED indicator.

ASE output on:	3.3V
ASE output off:	0.0V
- **Safety Interlock**
The SMA connector on rear panel is for safety interlock input.
Its shield is GND and the core is input. Shorting its core and shield will enable ASE output. Once they are disconnected output will be shut down immediately. When short-circuit is set up again the ASE output will be restored to previous status.

Interlock Status	Emission Control
Open-circuit	Off
Short-circuit	On

3 Connection and Operation

Warning

- **This ASE light source will have 20dBm or more output once the ‘Emission’ button lights up, even without GUI connection.**

- **An initial 20dBm output was set in factory and can be changed and saved by using GUI.**

- 1) Plug the AC power cord into the receptacle on the rear panel of the module, and connect to 100-240V AC power source.
- 2) Clean the FC/APC connector of SMF-28/PM1550 fiber cables properly, and then connect it to the output port.
- 3) Connect interlock input, or leave the shorting cap on the SMA port.
- 4) If needed, connect the emission status port to desired external device.
- 5) Turn power on using the rocker switch on the rear panel of the device.
- 6) Switch Turn Key to 'ON' position to power on pump circuit and enable USB functions.
- 7) Make sure Emergency Button is pulled up.
- 8) Set Interlock at desired status.
- 9) Connect the USB port on the rear panel to a computer by using the type-B USB cable coming with the device.
- 10) Change ASE settings through GUI software, if needed.
- 11) Click 'Pump on' in GUI.
- 12) Push Emission Button down to turn on ASE output. It will be lighted up in solid blue. Now the ASE light source will have output power if it wasn't set as 'Pump OFF' in GUI.
- 13) Use GUI for getting ASE status, changing output power, saving setting, etc. Please see Part 4 for detailed instruction.
- 14) To turn off ASE output push Emission Button to pop it up and its blue indicator will turn dark.
- 15) Switch Turn Key to OFF position to shut down the power of pump circuit and disable USB functions.

4 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 'ASE GUI V1.0' from the link below, under Other Download.
<https://agiltron.com/product/fiber-coupled-broadband-light-source-single-mode/>



Figure 2: Driver downloading link

- 2) Unzip the file and run ASE GUI.exe to install the GUI on host computer.
- 3) Switch the turn key to 'On' position on the front panel to power up the whole unit and enable USB functions.
- 4) Run ASE GUI V1.0.
- 5) Choose device model ASE-M

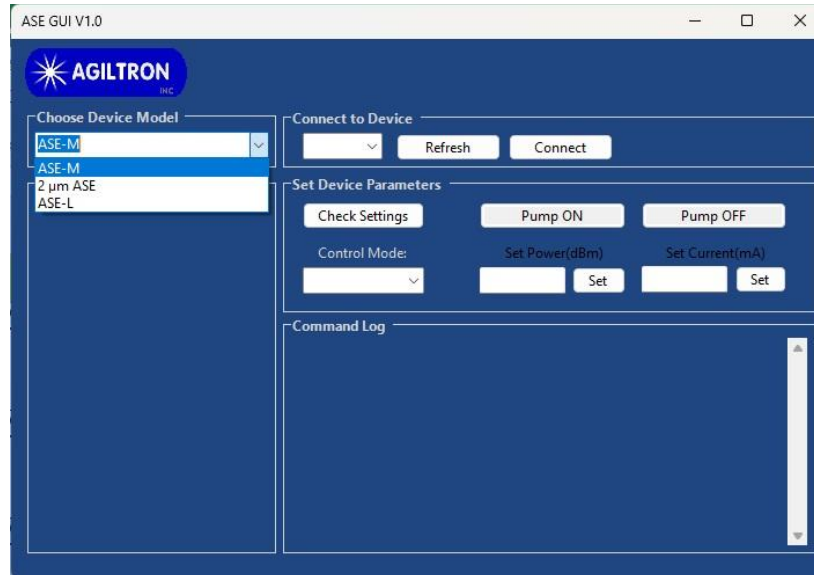


Figure 3: Remote control software: model selection

6) Port Selection:

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

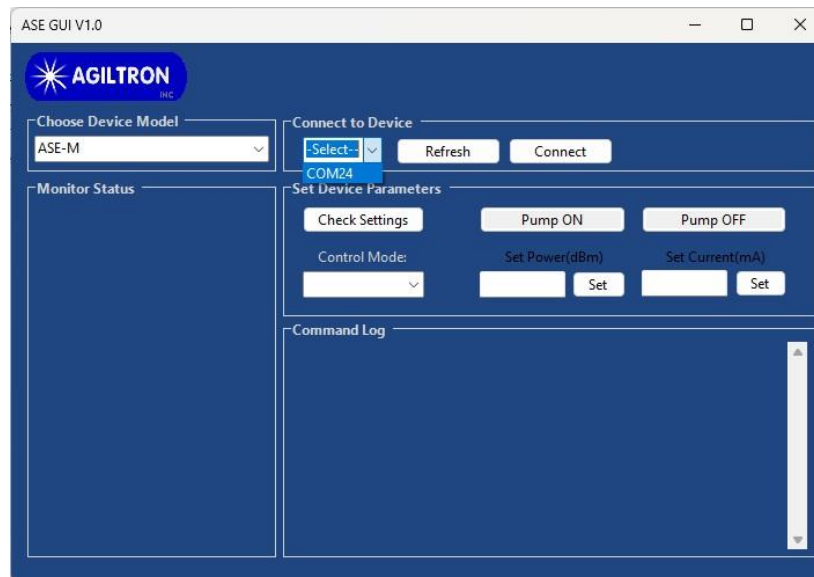


Figure 4: Remote control software: COM port selection.

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

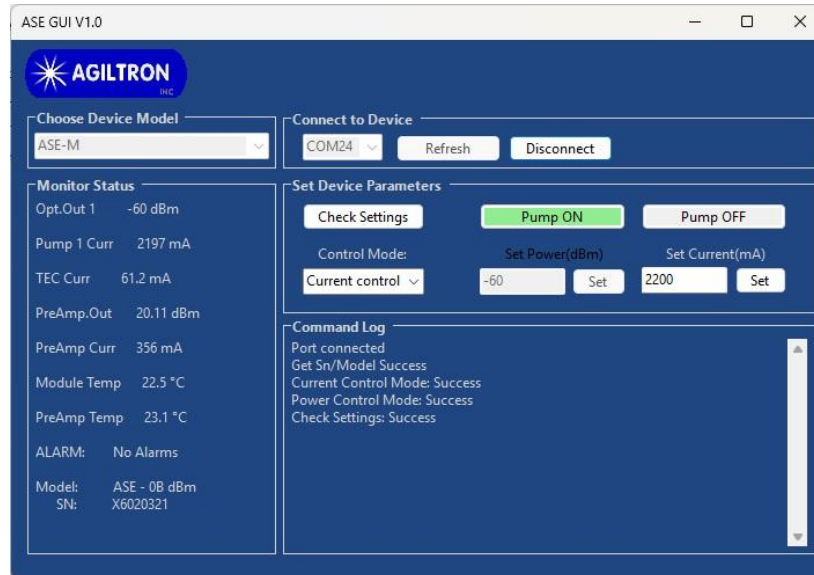


Figure 5: ASE is connected successfully. No power monitor for current ASE models.

- 9) Check Setting

Click to get the settings from the ASE light source.

- 10) Change setting

The ASE light source only works at ACC mode (automatic current control).

Input driving current value into the 'Set Current (mA)' box, and click 'Set' button.

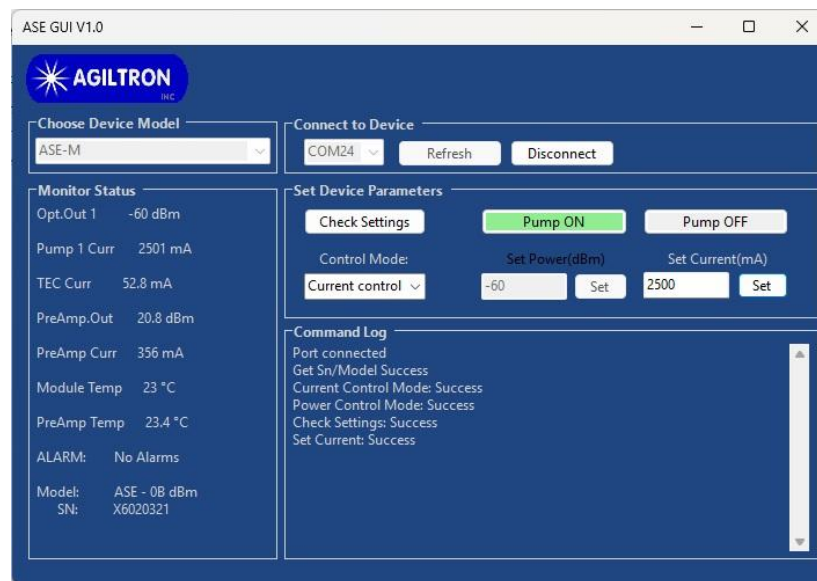


Figure 6: Remote control software: setting change

11) Save Settings

Each time when 'Set' button is clicked all current settings will be saved to ASE light source. When turn on the ASE light source next time it will run under saved settings, even without GUI connection.

12) Emission ON/OFF

Click 'Pump ON' or 'Pump OFF' button to turn on/off the ASE output.

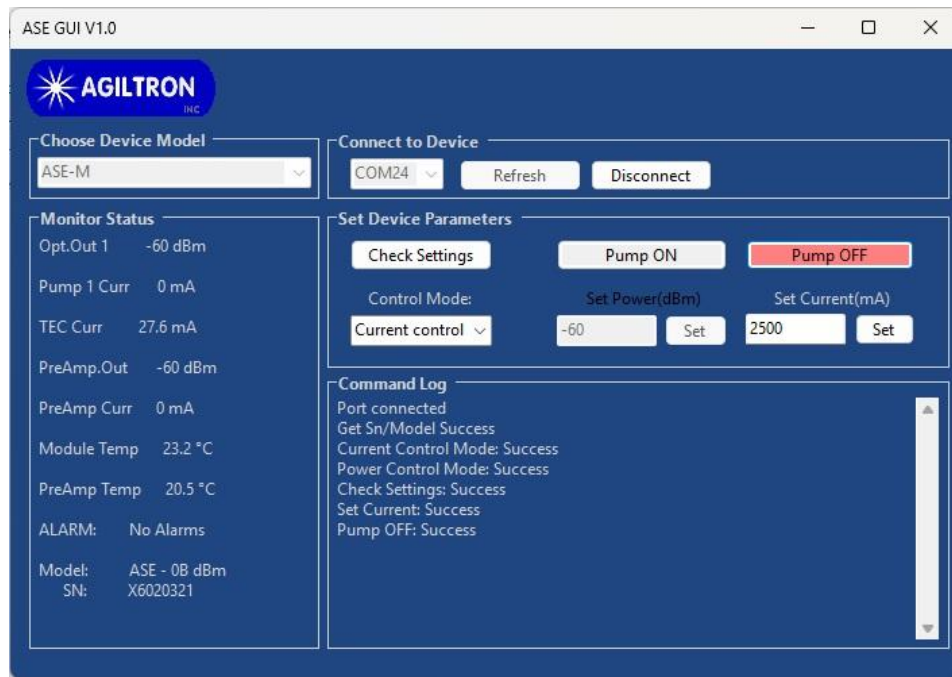


Figure 7: Remote control software: output is turned off.

Note:

ASE output will be enabled only when all the following conditions are met.

- AC power: on
- Turn key: at 'On' position
- GUI setting: 'Pump On'
- Interlock: shorted
- Emergency button: pulled up.
- Emission button: pushed down and lighted up in solid blue.