

Narrow Line width Tunable Laser 〈TLG〉

user's manual

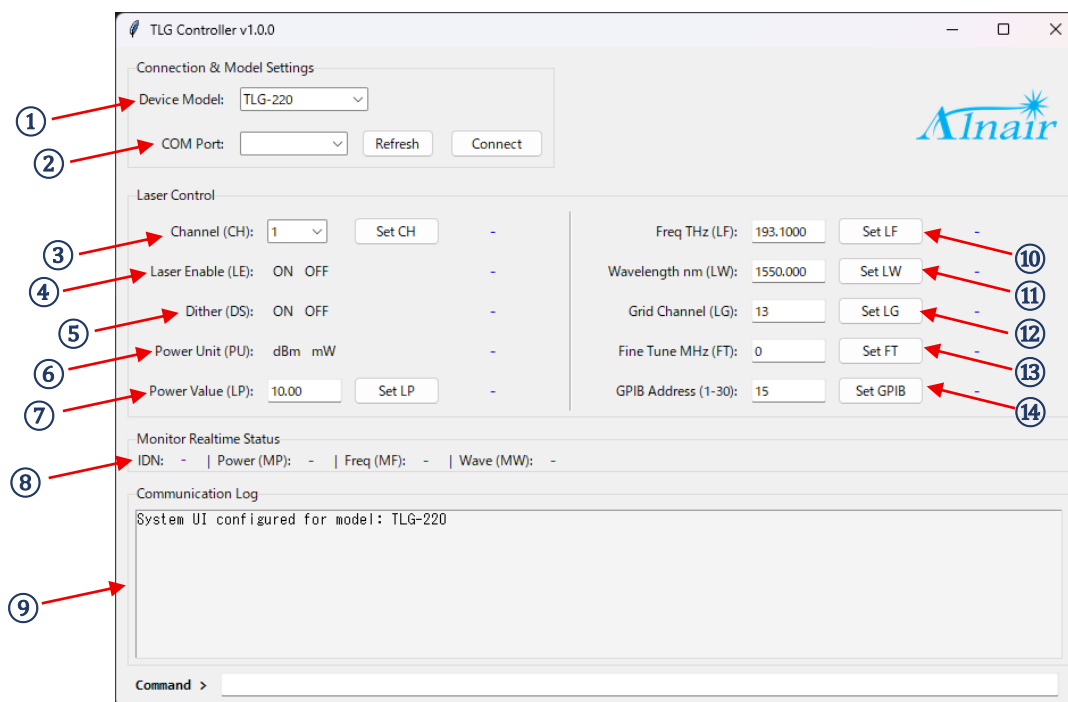


© Copyright Alnair. Corporation. JAPAN 2019. All rights reserved.
Information in this document is subjected to change without prior notice.

■CONTENTS.

- 1. UI Component & Function Mapping**
- 2. Standard Operation Procedures**

1. UI Component & Function Mapping



① Device Model	Selects or displays the connected hardware model
② COM Port	Lists available serial ports; click [Refresh] to rescan or [Connect] / [Disconnect] to link.
③ Channel (CH)	Selects the active laser optical channel; click [Set CH] to apply.
④ Laser Enable (LE)	Activates (ON) or deactivates (OFF) the primary laser emission.
⑤ Dither (DS)	Toggles internal frequency dithering control (ON/OFF).
⑥ Power Unit (PU)	Selects the preferred power unit expression between dBm and mW.
⑦ Power Value (LP)	Sets the target optical output power level; click [Set LP] to apply.
⑧ Monitor Realtime Status	Displays continuously polled summary data string including IDN, Power (MP), Freq (MF), and Wave (MW).
⑨ Communication Log	Logs command traffic (TX / RX) and provides a Command > line to manually pass raw scripts.

⑩ Freq THz (LF)	Configures absolute laser emission frequency; click [Set LF] to apply.
⑪ Wavelength nm (LW)	Configures absolute laser emission wavelength; click [Set LW] to apply.
⑫ Grid Channel (LG)	Locks the laser onto specified standard ITU grid channels; click [Set LG] to apply.
⑬ Fine Tune MHz (FT)	Executes micro-frequency fine-tuning; click [Set FT] to apply.
⑭ GPIB Address (1-30)	Sets the remote network hardware address for architectures supporting GPIB; click [Set GPIB] to apply.

2. Standard Operation Procedures

2.1 Startup and Connection Procedures

1. Connect the device to your PC via the USB cable.
2. Launch the software application.
3. Click [Refresh] to update the port list, then select the correct active port from the COM Port dropdown menu.
4. Click [Connect] to establish communication.
5. Verify that the control entries unlock and the Monitor Realtime Status summary updates automatically.

2.2 Adjusting Wavelength, Frequency & ITU Grid

1. To Set Absolute Wavelength / Frequency: Enter the value in the Wavelength nm (LW) or Freq THz (LF) box and click [Set LW] or [Set LF] to apply.
2. To Set ITU Grid Channel: Enter the channel number (1–193 for C-Band) in the Grid Channel (LG) box and click [Set LG] to lock the laser onto the specified grid channel.
3. To Set Fine Tune: Enter the offset value in the Fine Tune MHz (FT) box and click [Set FT] to apply micro-frequency adjustments.
4. Verify the changes via the blue readback status text on the right of each control row.

2.3 Adjusting Laser Power & Emission Control

1. To Configure Power Unit: Click to select dBm or mW in the Power Unit (PU) radio option row.
2. To Set Target Power: Enter the power value in the Power Value (LP) box and click [Set LP] to apply.
3. To Activate Laser Emission: Click ON in the Laser Enable (LE) row; verify that the physical laser LED indicator responds and the real-time status monitors stabilize.
4. To Control Dithering: Click ON or OFF in the Dither (DS) row to enable or disable frequency dithering control.

2.4 Shutting Down and Disconnection Procedures

1. Click OFF in the Laser Enable (LE) row to safely deactivate the laser emission before breaking the link.
2. Click [Disconnect] to safely terminate the active serial communication session.
3. Close the software application.
4. Disconnect the physical USB cable from your PC.