

# LASOS Commander Manual for DPSSL series

## Manual

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## 1 General



**System requirements:** Windows 7, Windows 8, Windows 10

The LASOS Commander allows operating laser models of the LASOS DPSSL series.



Not all functions are supported by all laser models.

## 2 Getting started

### 2.1 Installation of the software

The software and all required modules will be delivered on a data carrier (USB stick or CD) with the shipment or can be downloaded from the LASOS website (lasos.com). Executing the file setup.exe starts the installation. Please follow the instructions. The installation routine installs the LASOS Commander, the required National Instruments Products and FTDI drivers are necessary to communicate with the laser. After successful installation a folder "LASOS" in the Start Menu and an icon on the desktop is generated.



The laser or laser system must not be connected before and during installation of the software. Please connect the laser only after the software has been installed



To run the LASOS Commander the installation of a National Instruments runtime environment is required. You have to agree to the National Instrument license agreement during installation of the software.



The installation routine installs FTDI drivers necessary to communicate with the lasers. You have to agree to the Future Technology Devices International license agreement during installation of the software.



After installation you have to restart your computer

### 2.2 Connect the SwitchBox

Connect the laser module and the USB interface by a standard USB cable.



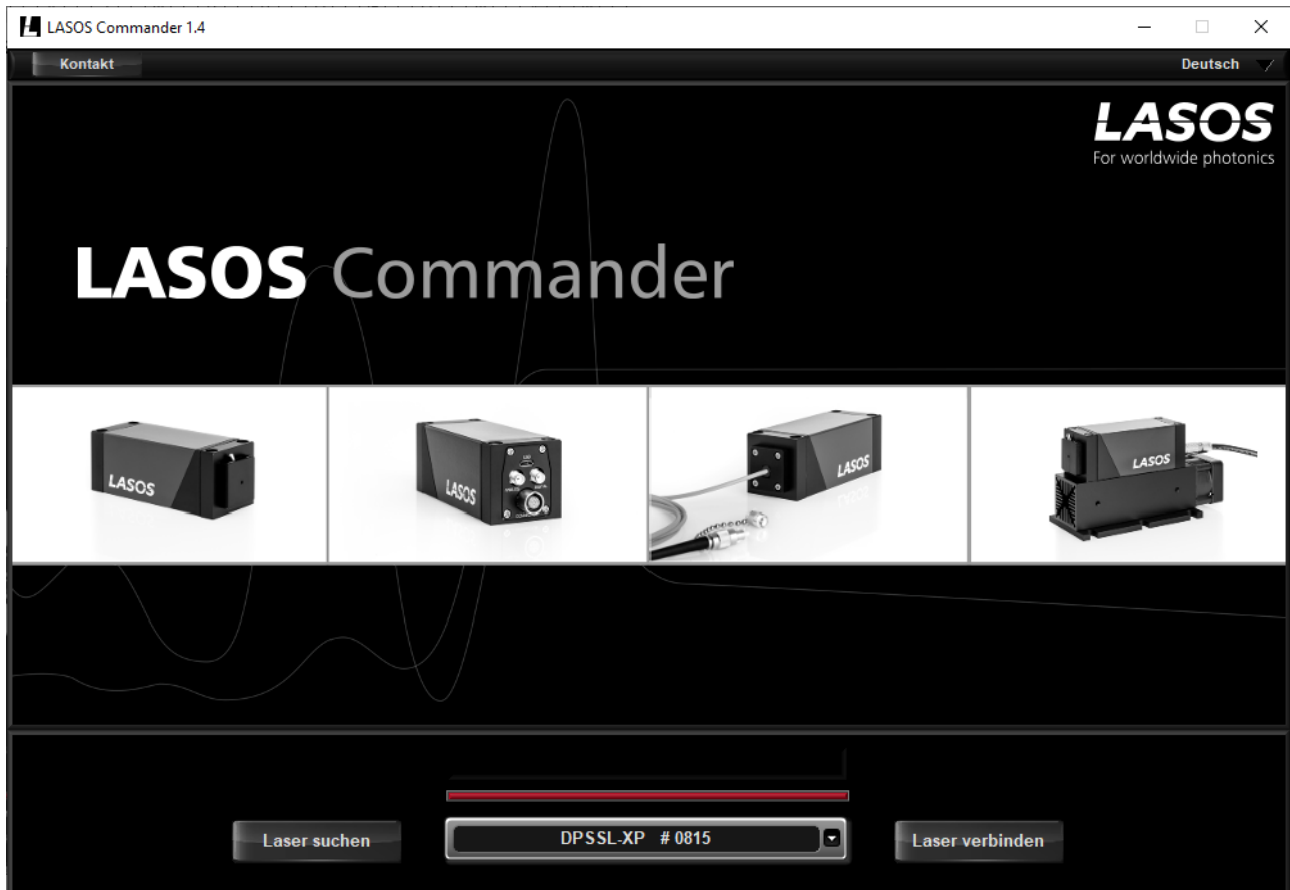
When the laser is connected for the first time Windows will install the required drivers. Please wait until the procedure has finished.

## 3 Using the LASOS Commander

### 3.1 Start screen

After starting the software, the start screen will appear.

Figure 1 Start screen of the LASOS Commander



The LASOS commander will automatically search for connected laser modules. The lasers will appear in a drop-down list. Use the button "connect laser" to connect a particular laser module.



When no laser device is found an error message is displayed. Please check the connections and start again by pressing the button "Search laser". If there is still no laser found contact the LASOS support.






If a laser device is detected which is not compatible with the actual version of the LASOS commander the model name is marked by a red exclamation point and additional information is displayed. Please contact the LASOS support for assistance.

## 4 Operating the laser

### 4.1 General

You can choose between the screens "Basic view" and "Expert view". "Basic view" gives information on the status of the laser and allows tuning the output power. In "Expert view" you find more detailed information. Switch the screens by selecting the button at the bottom of the screen.

-  In any screen you have access to contact data of the LASOS support by pressing the "Support Button".
-  You can choose the program language by clicking on the language displayed in the upper right corner of the screen. English and German are available.
-  Information on the laser or laser system like model number and serial number are displayed in the lower part of any screen. Use these data when you contact the LASOS support. In addition, the most important information on the status of the laser are displayed at the left part of any screen.

### 4.2 Basic view

#### 4.2.1 Displays and functions

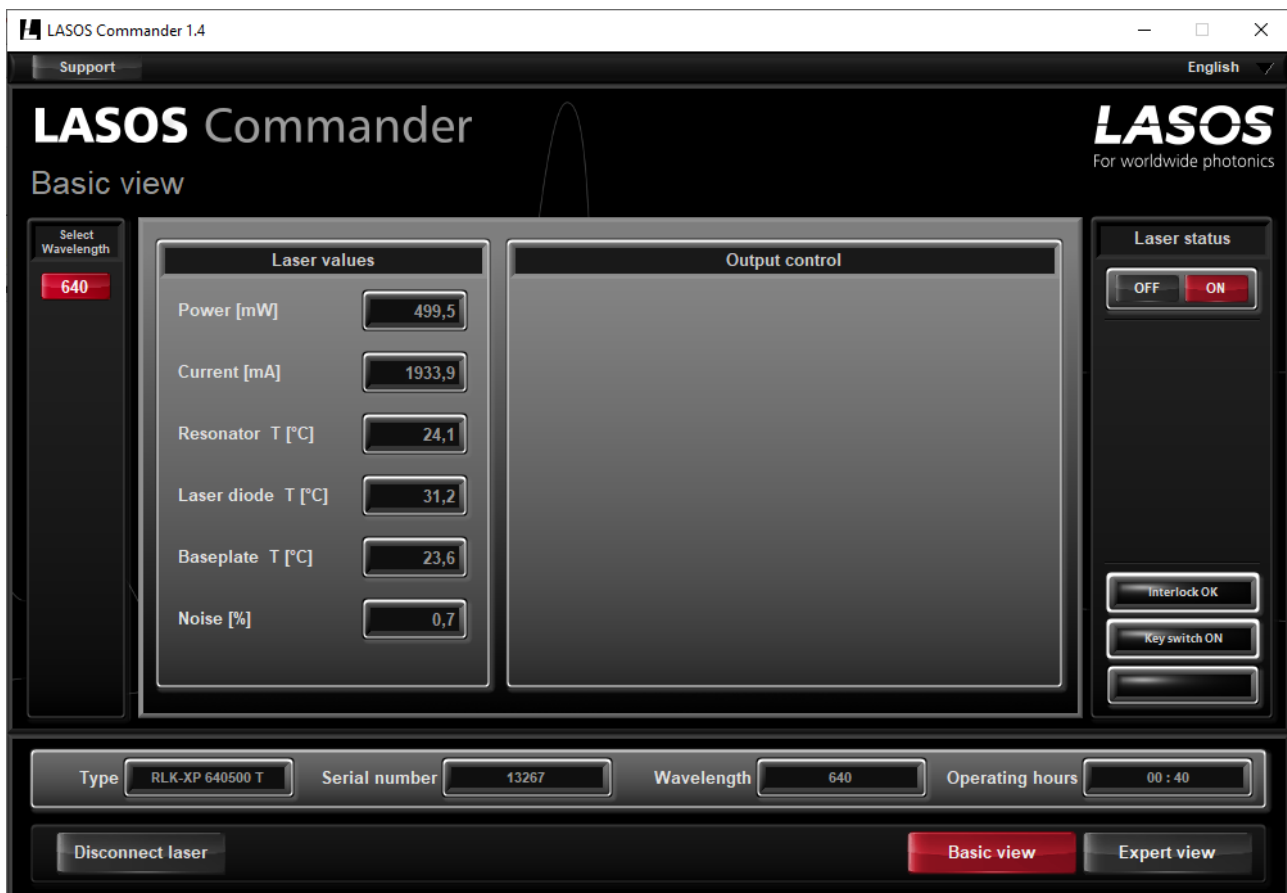


Figure 2 Screen of "Basic view"

Table 1 Functions in Basic view

Window	Display	Function
Select wavelength	Wavelength [nm]	Wavelength of the selected laser
Laser values	Power [mW]	Actual output power
	Current [mA]	Laser diode current
	Resonator T [°C]	Temperature of the resonator
	Laser diode T [°C]	Internal temperature of the pump diode
	Baseplate T [°C]	Temperature of the baseplate
	Noise [%]	Current rms noise value
Output control	blank	Only for DPSSL

Table 2 Additional information (displayed on every screen)

Window	Display	Function
Laser status	Laser off/on	Shows if the laser is switched on or off Switch the selected laser on and off by pressing the appropriate button
	Interlock	Interlock status
	Key switch	Status of the key switch
Information	Type	Model number of the selected laser
	Serial number	Serial number of the selected laser
	Wavelength	Wavelength of the selected laser
	Operating hours	Counter of operating hours



When lasers are added or removed use "Disconnect laser" to search for devices in the start screen

4.3 Expert view

4.3.1 Submenu „Power“

Figure 3 Screen of "Expert view", submenu "Power"

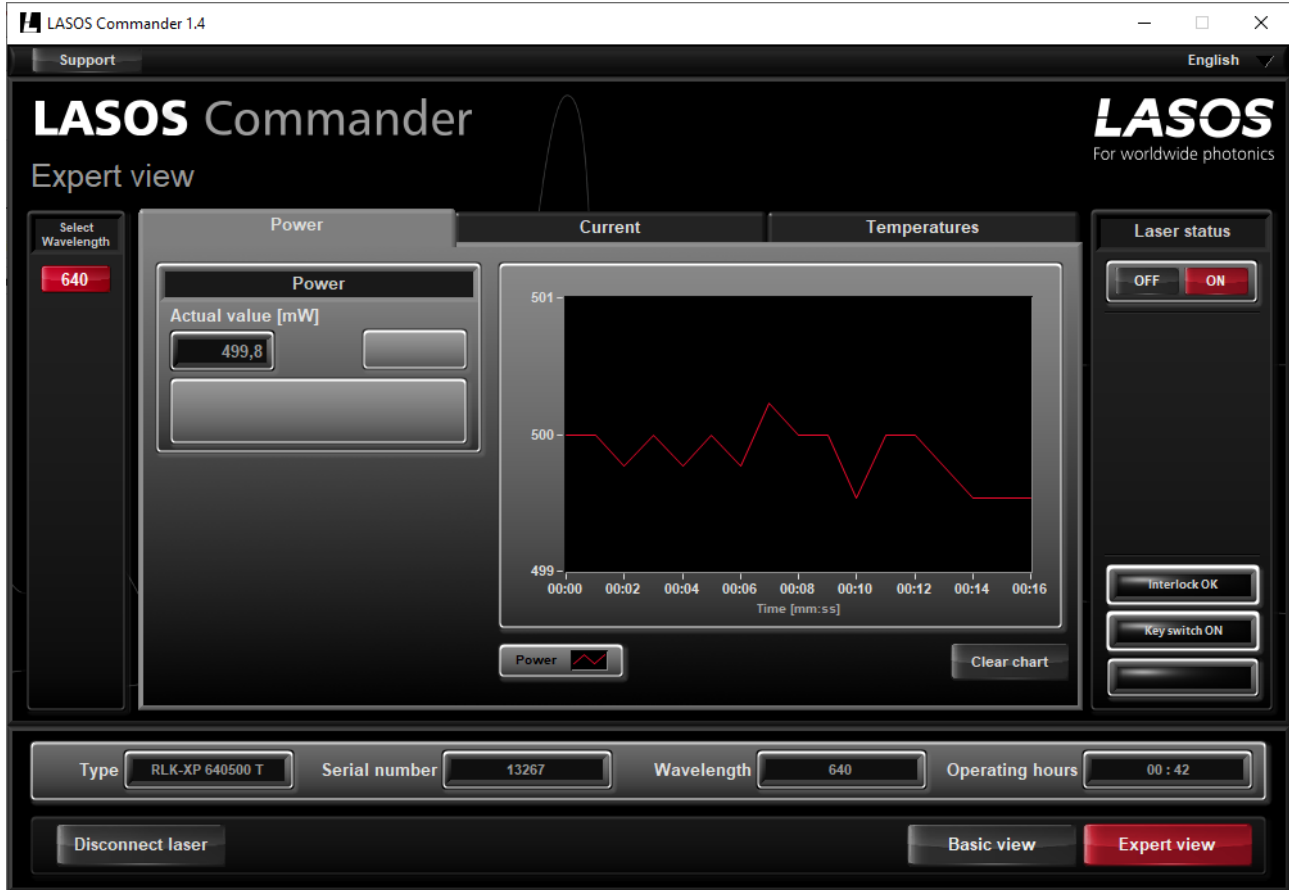


Table 3 Functions in "Expert view", submenu "Power"

Window	Display	Function
Select wavelength	Wavelength [nm]	Wavelength of the selected laser
Power	Actual value [mW]	Actual output power
Graph	Diagram	Shows the course of the output power
	Clear chart	Reset starting point of the graph

### 4.3.2 Submenu Current

Figure 4 Screen of "Expert view", submenu "Current" for LASOS DPSS laser series

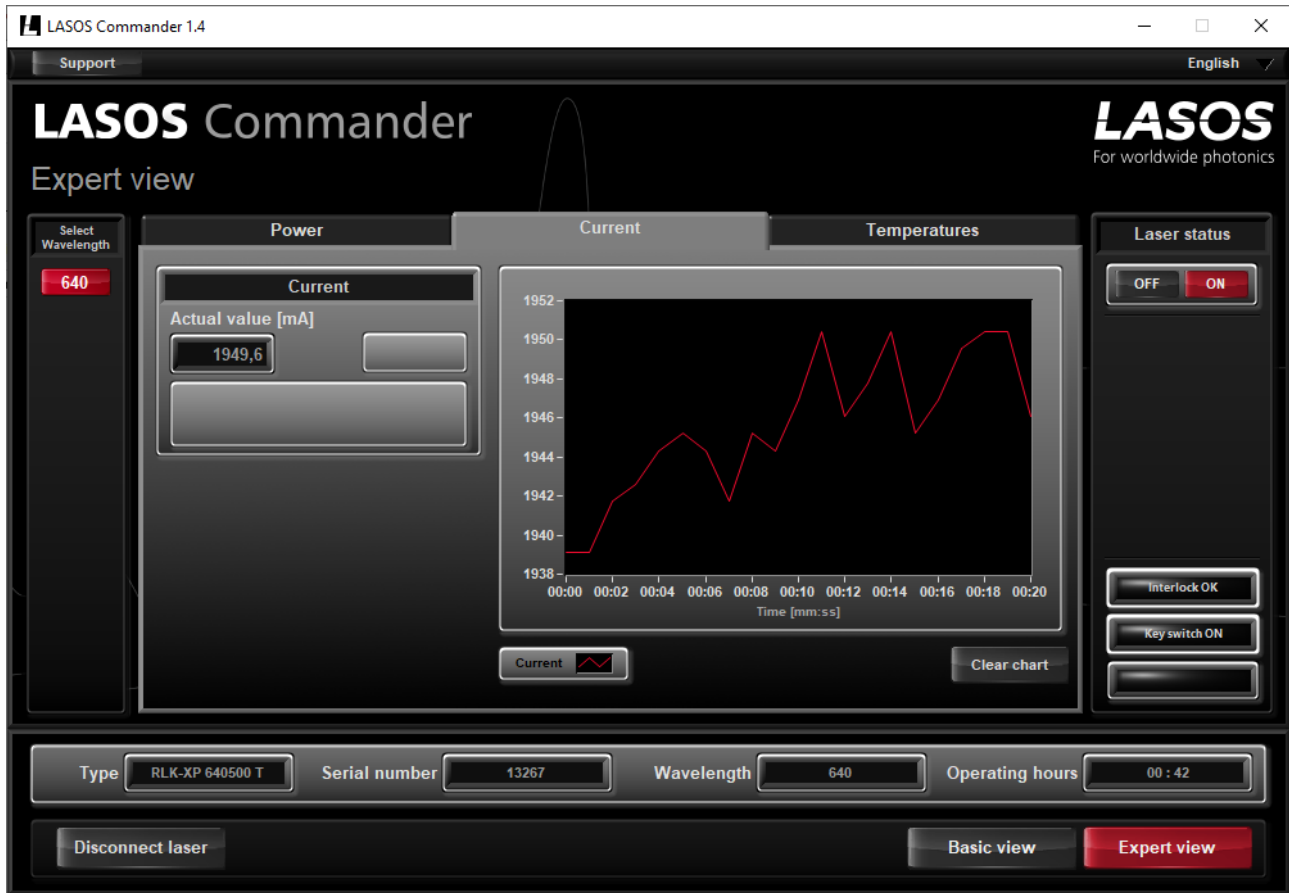


Table 4 Functions in "Expert view", submenu "Current"

Window	Display	Function
Select wavelength	Wavelength [nm]	Wavelength of the selected laser
Current	Actual value [mA]	Actual value of pump diode current
Graph	Diagram	Shows the course of the pump diode current
	Clear chart	Reset starting point of the graph

### 4.3.3 Submenu Temperatures

Figure 5 Screen of "Expert view", submenu "Temperatures" for LASOS DPSS laser series



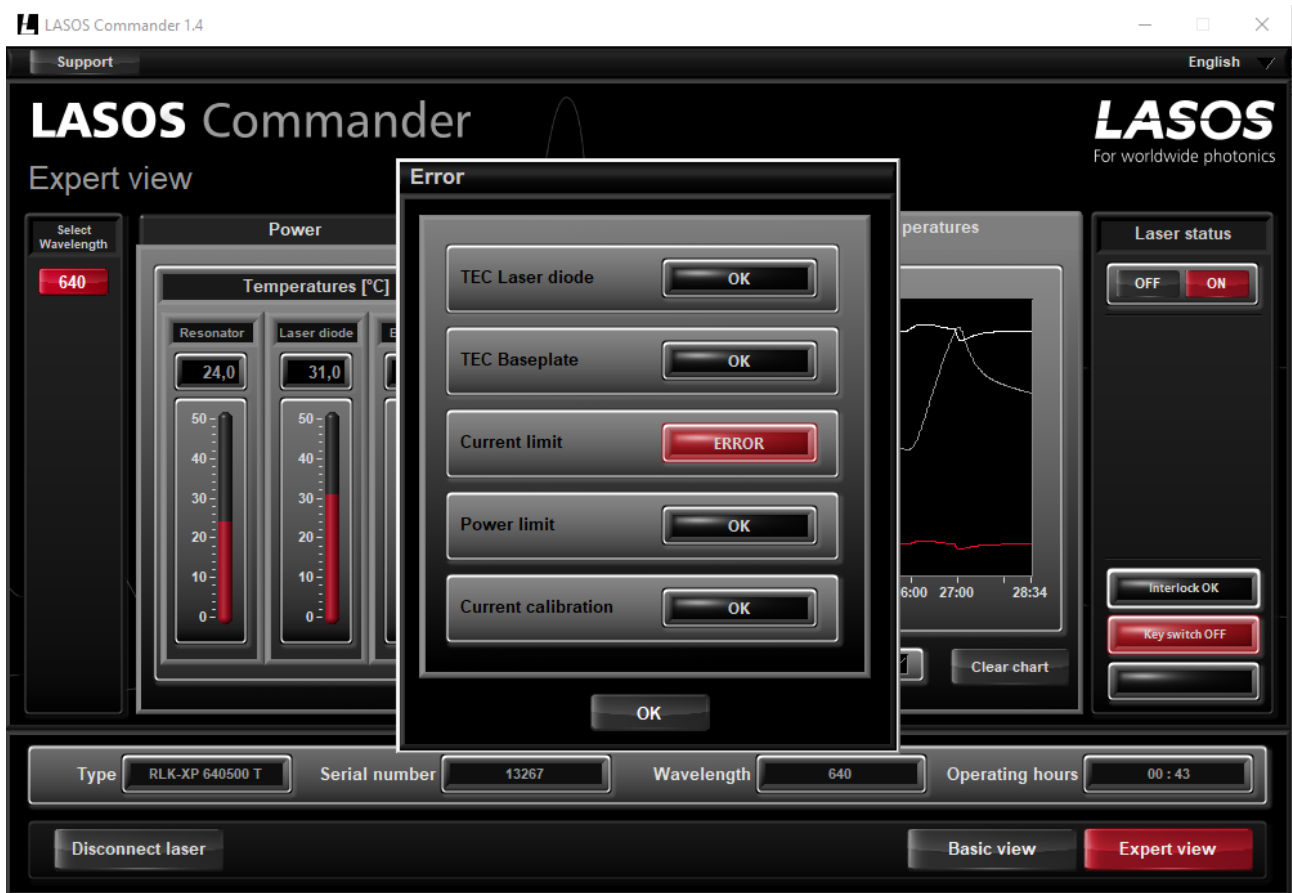
Table 5 Functions in "Expert view", submenu "Temperatures"

Window	Display	Function
Select wavelength	Wavelength [nm]	Wavelength of the selected laser
Temperatures [°C] (Information only)	Resonator	Actual value of resonator temperature (information only)
	Laser diode	Actual value of pump diode temperature (information only)
	Baseplate	Actual value of baseplate temperature (information only)
Graph	Diagram	Shows the course of the resonator, laser diode and base plate temperatures
	Clear chart	Reset starting point of the graph



## 5 Error messages

Figure 6 example for an error message occurred



In case of an error a clear text message is displayed. Please contact the LASOS service with referring to the text of the message.