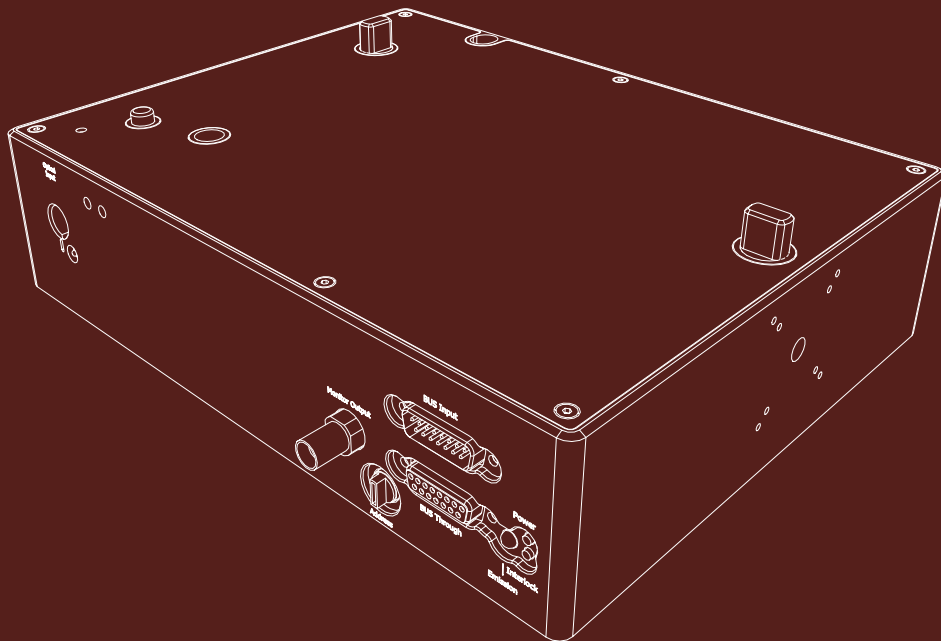


SuperK VARIA

Product Guide

Revision 1.3 10-2023



PRODUCT GUIDE

This guide includes information for the following NKT Photonics products:

SuperK VARIA

Variable Bandpass Filter A301-100-000



CAUTION: Do not open the device chassis. All chassis are equipped with warranty labels (see [Figure 40](#)) on their covers. The warranty is void if a device is opened.

Manufactured by:

NKT Photonics A/S

Blokken 84, Birkerød-3460 Denmark

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Specifications are listed as metric units. Imperial units listed are conversions.

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Guide Overview

This product guide is intended to provide functional, operational and installation information for the SuperK VARIA. The guide includes chapters that cover VARIA description, installation, operation and parameter adjustment.



WARNING: Do not operate a laser with the VARIA before first reading and understanding all warnings, cautions and handling information stated within the document:

SuperK VARIA Safety, Handling and Regulatory Information

The paper copy of this guide is included with your accessory; it can also be downloaded from:

<https://www.nktphotonics.com/product-manuals-and-documentation/>

Documentation A USB memory stick is included. It contains documentation for all NKT Photonics products including this accessory.



Terminology The guide may refer to the SuperK VARIA as the VARIA, device or accessory.

Target Audience This guide is for technical personnel involved in the selection, planning and deployment of lasers and photonic equipment in laboratory and industrial settings. The guide assumes a reasonable knowledge level of lasers, photonic principles and electrical interface connectivity.

Chapters Inside This guide includes the following chapters:

- Chapter 1 “**Description**” — Describes the accessory including its general operational principles, management and interfaces.
- Chapter 2 “**Installation**” — Includes information and procedures on how to correctly install the accessory chassis.
- Chapter 3 “**CONTROL Interface**” — This chapter provides the details on how to manage the accessory using NKT Photonics CONTROL software interface.
- Appendices — The appendix includes specifications, servicing information, support contact details, and how to install the management software.

Added information and Safety Notices

Lasers with their accessories are highly dangerous devices that can cause serious injury and property damage. This guide use the following symbols to either highlight important safety information or provide further information in relation to a specific topic.



NOTE: Highlights additional information related to the associated topic and/or provides links or the name of the NKTP guides describing the additional information.



CAUTION: Alerts you to a potential hazard that could cause loss of data, or damage the system or equipment.



WARNING: The laser safety warning alerts you to potential serious injury that may be caused when using a laser with the accessory.

Revision This section records the document revision details.

Release date	Version and changes
2020-October	1.0 updated from earlier release
2021-January	1.1 Updated support contact details in appendix B.
2021-April	1.0 Rolled back to revision 1.0 for internal system requirements.
2022-January	1.1 The following changes were made: <ul style="list-style-type: none">• Corrected External bus cable description in section “External bus” on page 24.• Updated language for clarity and figure styles throughout.• Updated Procedure 2 on page 39 to Windows 10.
2022-March	1.2 Updated the following: <ul style="list-style-type: none">• Corrected output emission description from visible to IR in section “Auxiliary optical output aperture” on page 17.
2023 October	1.3 Updated the style of the document.

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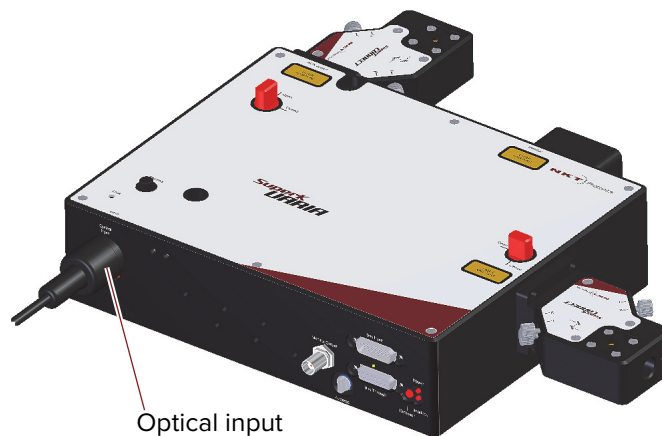
1

Description

A SuperK VARIA is a plug & play filter accessory for the SuperK series of lasers. It provides a filtered output channel using a variable bandpass filter. In addition to the primary output channel, it also includes a second auxiliary output channel which emits the remaining portion of unfiltered light.

A SuperK VARIA filter block may be combined with a SuperK CONNECT and SuperK Fiber Delivery to form a Fiber Delivery System (FDS).

Figure 1 SuperK VARIA general view



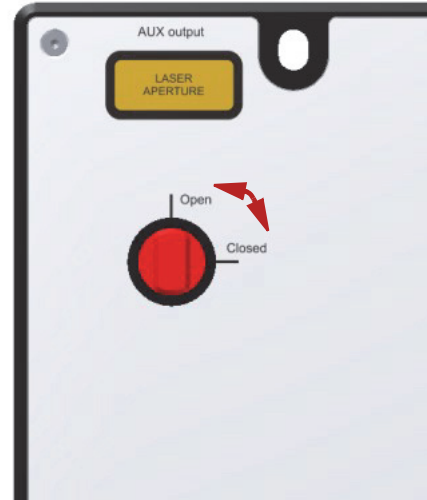
Features

- Output** Emission from SuperK VARIA output ports are free space beams. To deliver the filtered and unfiltered auxiliary outputs, Fiber Deliver System (FDS) using SuperK CONNECTs can be fitted to the VARIA.
- Interlock** SuperK VARIAs are equipped with a safety interlock. The interlock interconnects with the SuperK laser's interlock system. The interlock system disables emissions immediately when the interlock circuit is broken, such as an interconnected safety door switch. Refer to [“Electrical Connections” on page 24](#).
- Shutters** As a safety feature, each optical output of the SuperK VARIA is equipped with a mechanical shutter. When the shutter is closed, it blocks all optical emission. The

shutters are manually operated by turning the shutter knob between the *Open* and *Closed* positions as shown in [Figure 2](#).

Figure 2 Auxiliary output – shutter knob set to open

Output aperture shutters
Open – emission unblocked
Closed – emission blocked



CAUTION: When the laser outputs are not in use, NKTP recommends to CLOSE the shutters.



CAUTION: You can view the position of the shutters in the status panel of CONTROL, see “[Status Indicators](#)” on page 29.



WARNING: When the Auxiliary output is OPEN, significant IR power can be emitted (several watts). At this level, the power is sufficient to ignite paper, cartons, gyprock walls and other similar material.

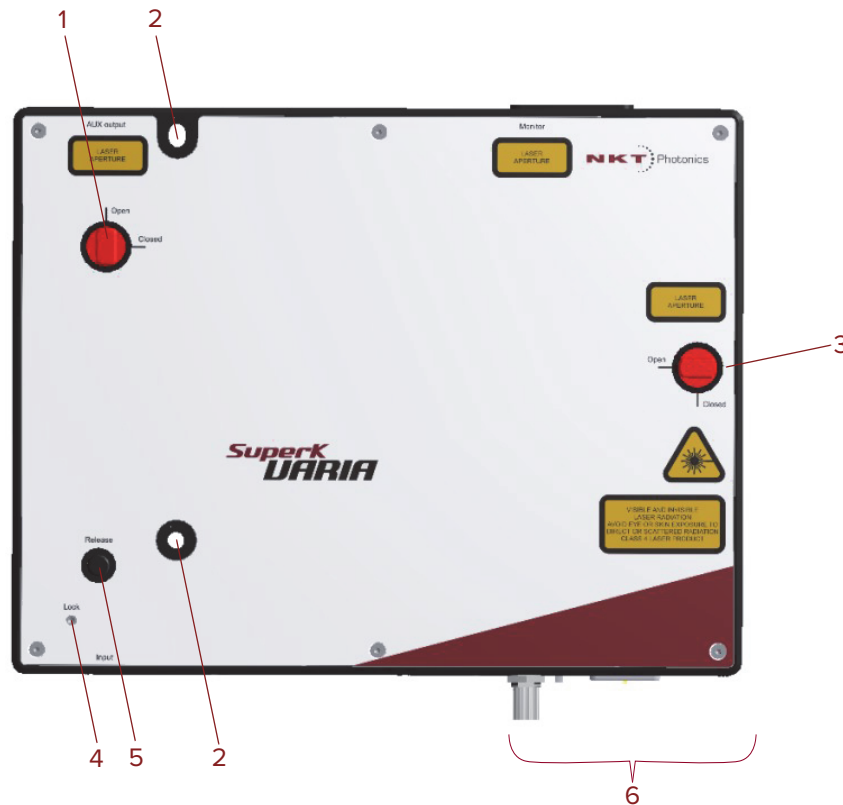


WARNING: The NKTP FDS is rated for 500 mW maximum. SuperK system power should be adequately reduced when mounting an FDS (not advisable) to the Auxiliary output.

Top panel The top panel shown in [Figure 3](#) includes the following:

- Input and output aperture indicators
- Output shutter control knobs
- Collimator release button with locking screw
- Mounting hole access

Figure 3 Top panel



- | | |
|----------------------------|---|
| 1 Auxiliary output shutter | 4 Collimator locking screw |
| 2 Mounting holes | 5 Collimator release button |
| 3 Primary output shutter | 6 Electrical interfaces and LEDs ⁱ |

i. See “Electrical Interfaces” on page 17

Auxiliary output shutter

Set this shutter to block or unblock the auxiliary emission output aperture. Set the shutter to “Closed” to block emission and “Open” to unblock emission from the auxiliary output aperture.

Mounting holes

The two mounting holes (2) are designed to fasten the SuperK VARIA to either metric or imperial optical tables that have screw holes spaced at either 25 mm or 1” pitch.

Primary output shutter

Set this shutter to block or unblock the primary filtered output emission from the aperture. Set the shutter to “Closed” to block emission and “Open” to unblock emission from the aperture.

Collimator release button and locking screw

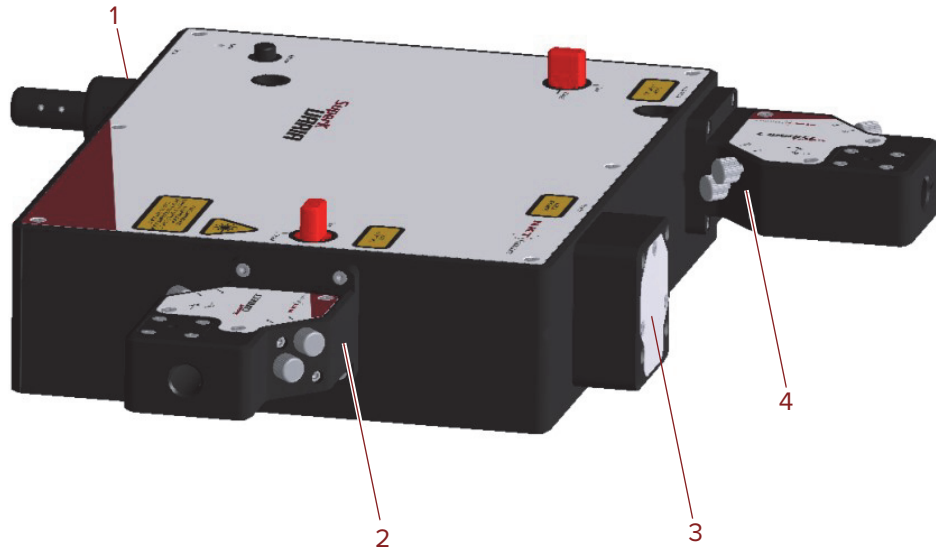
SuperK laser outputs are provided with a barrel shaped collimator. When inserted into an VARIA optical input receptacle, it is automatically retained by a locking mechanism that securely holds the barrel in place. To release the collimator from the input receptacle, press the Collimator *Release* button (6).



NOTE: Do not over tighten the lock screw, doing so may damage the threads.

Optical apertures Optical apertures are located on the side panels of the VARIA as shown in [Figure 4](#) and described in the following.

Figure 4 Optical Interfaces



- | | |
|--|--|
| <p>1 Optical input aperture – see Figure 1</p> <p>2 Primary optical output aperture – with CONNECT mounted</p> | <p>3 Monitor optical output aperture – with optional cover plate mounted</p> <p>4 Auxiliary optical output aperture with CONNECT mounted</p> |
|--|--|

Optical input aperture

The Optical input aperture is a receptacle that houses the output collimator of a SuperK laser. The laser’s output collimator is inserted into the aperture until it clicks and locks in place. To remove the collimator, press the release button. The collimator can be secured by tightening the lock screw.



CAUTION: Do not over tighten the lock screw, doing so may damage the threads.

The optical input includes an interlock switch. If a SuperK collimator is not inserted in the input receptacle, the switch detects this and prevents emission (refer to [Figure 5](#)).



CAUTION: Always loosen the optical input lock screw before removing a collimator.

Primary optical output aperture

This is a free space output aperture for the primary filtered emission.

Auxiliary optical output aperture

This is a free space output aperture with IR emission.

Monitor optical output aperture

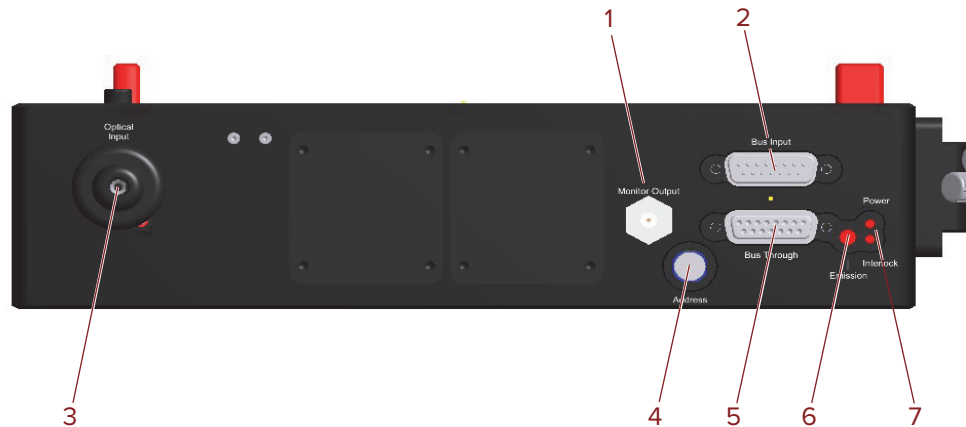
This is a free space output aperture for power monitoring (optional).



NOTE: All output apertures include 4 screw holes for mounting, for example, a fiber coupler with a SuperK CONNECT accessory.

Electrical Interfaces The electrical interfaces are located on the same side panel where the optical input aperture is located. [Figure 5](#) shows the panel, all electrical interfaces are located on the right side of the panel.

Figure 5 Electrical Interfaces and optical input



- | | | | |
|---|--|---|---------------------------------------|
| 1 | Monitor output | 5 | Bus through output port |
| 2 | External bus input port | 6 | Emission LED ⁱ |
| 3 | Optical input aperture (collimator receptacle) | 7 | Power and Interlock LEDs ⁱ |
| 4 | Accessory bus address selector | | |

i. See “Status LEDs” on page 18

Monitor output (optional)

This port outputs an electrical signal representing the repetition rate of the laser’s output pulse. The port is optional and only available on custom orders. Contact NKT Photonics sales engineering for further information.

External bus input port

The bus input port connects accessories in a daisy chain with a SuperK laser. SuperK lasers and their accessories connect using the NKTP External bus protocol. The bus carries data communications, DC power and the interlock signal from the laser to accessories connected to its bus.

Optical input aperture

See “Optical input aperture” on page 16.

Accessory bus address selector

When multiple accessories are connected in an External bus daisy chain, to a SuperK laser, you can use this dial to set the bus address of the VARIA.

Accessories communicating on the same external bus must have a unique address. The address selector dial can set the bus address with up to 16 addresses from 0x0 to 0xF (hex). Only power on the SuperK laser and accessories after all accessories on the External bus daisy chain are configured with a unique address.

Bus through output port

Connects additional accessories to the External bus in a daisy chain configuration. A bus defeater must be connected to this port if no other accessories are used with the SuperK laser. Without a bus defeater at the end of the accessory External bus daisy chain, the interlock loop circuit is left open and emission is disabled at the SuperK laser.

SuperK VARIA Control

Software Description Both the SuperK laser and the VARIA accessory are controlled using NKT Photonic's CONTROL management software installed on a PC or the front panel interface.

A PC with CONTROL installed on it can connect to the laser using either the USB serial port or the 10/100 BASE-T Ethernet port on the laser. CONTROL communicates with the VARIA through the laser's External bus connection.

Chapter "CONTROL Interface" contains information on using NKTP's CONTROL software and how to connect to and control the VARIA. It also includes instructions on how to set the center wavelength to a resolution of 0.1 nm to match the intended application.

CONTROL software installation

Refer to the procedure found in [Appendix C](#).

Status LEDs

The VARIA includes three status LEDs as described in [Table 1](#). The LEDs are located on a side panel next to the External bus ports as shown in [Figure 6](#).

The emission LED is lit ON RED when the connected SuperK laser's emission is enabled. When ON RED, laser light is present at the primary and auxiliary optical output ports.



WARNING: If any of the VARIA aperture shutters are closed, emission is blocked. The position of the shutters does not affect the status of the emission LED, only the emission status of the connected SuperK laser.

Figure 6 Status LEDs

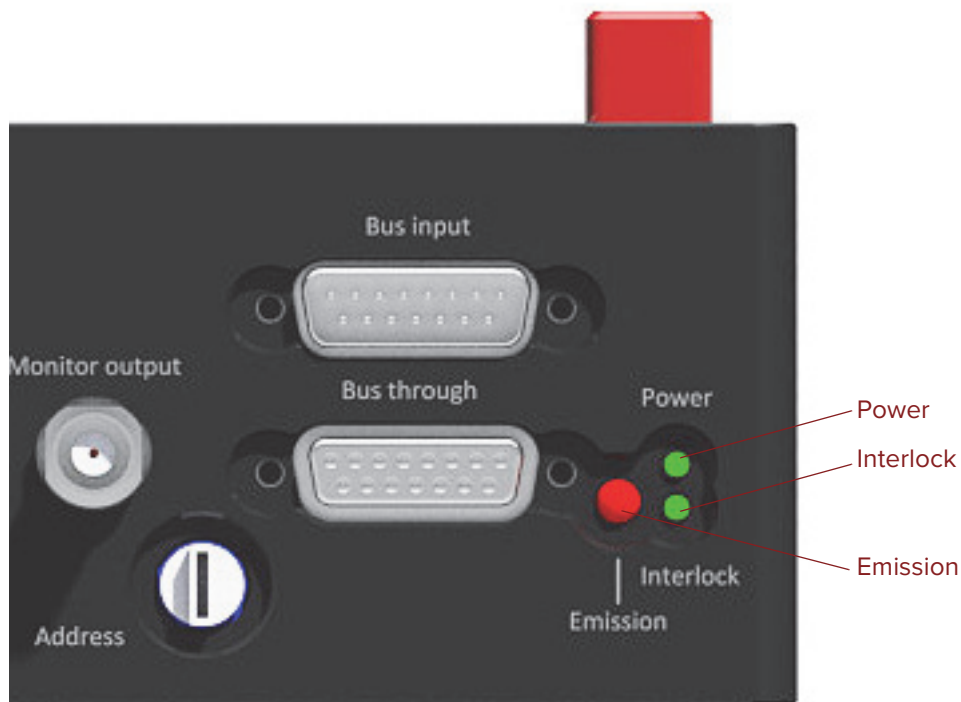



Table 1 Status LEDs

LED Name	Condition	Description
Emission	ON RED 	Emission enabled ⁱ The SuperK laser system emission is ON and class 4 emission is present at the primary and auxiliary optical output ports. The position of the mechanical shutters at each output port does not change the status of the emission LED.
	OFF	Emission disabled
Power	ON GREEN	The VARIA is powered ON; the external bus 12V DC power is OK.
	ON RED	DC supply voltage is low.
	FLASHING GREEN/ AMBER	Indicates data transmission on the external bus.
	OFF	The VARIA is OFF; no DC power connected.
Interlock	ON GREEN	Interlock safety circuit is closed; laser emission permitted.
	ON RED ⁱⁱ	Interlock safety circuit is open; laser emission is disabled.

i. **Warning:** SuperK emissions are rated Class 4.

ii. Check the SuperK laser for interlock error information.



WARNING: DO NOT OPERATE the SuperK laser until you are familiar with the controls and have taken all precautions necessary as described in the laser's safety handling and regulatory information document.

Chassis labels

The SuperK VARIA chassis includes multiple labels that indicate hazards and safety and product information. The labels are located on the panels as described in [Table 2](#) with the panels shown in [Figure 7](#) and [Figure 8](#).

Table 2 Chassis labels





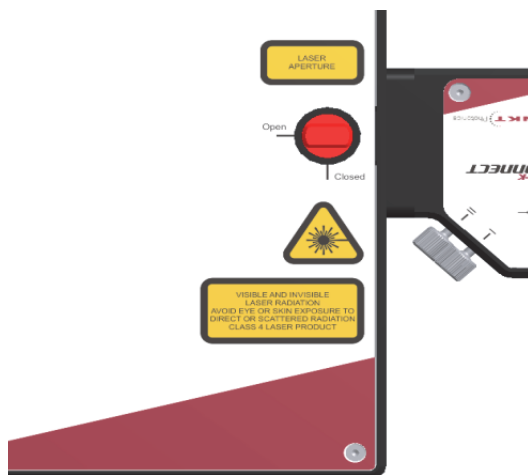
Label	Panel	Description	
Class 4 Laser Classification	Top	Safety information indicating the laser emission radiation class and precautions to take when the laser is operating.	
Laser Aperture	Top	Safety information alert indicating the location of the aperture where laser radiation is emitted from the device.	
Manufacturing	Side	Manufacturing information including address, part and serial number, date manufactured and regulatory compliance.	
Laser Radiation Warning	Top	Safety information alert indicating this area of the device is near a source of dangerous laser emissions.	

Figure 7 Side panel manufacturing label



Figure 8 Top panel labels

- 1 Laser apertureⁱ
 - 2 Laser radiation warning
 - 3 Class 4 emission hazards
- i. Laser apertures are located on the side panel adjacent the label.

2 Installation



CAUTION: For reliable operation, the SuperK VARIA should not be exposed to corrosive agents or excessive moisture, heat or dust.



CAUTION: Ambient operating environment specifications are listed in [Table 5 on page 35](#).



CAUTION: This product is not UL-approved but all safety components are UL-approved.

Installation process The following steps outline the installation process:

1. Prepare a suitable installation platform for the VARIA.
2. Place and fasten the VARIA to the prepared installation platform ensuring the optical outputs are aligned with the intended application.
3. Turn all optical output shutters to the *Closed* position.
4. Insert the SuperK output collimator into the *Optical Input* receptacle. See [“Optical Connections” on page 22](#).
5. Using an external bus cable, connect the *External Bus* port of the SuperK laser to the *Bus Input* port of the VARIA. See [“Electrical Connections” on page 24](#).
6. Place and connect the included bus defeater onto the VARIA *Bus Through* port connector.
7. Turn the SuperK laser power ON.
8. Observe and ensure the power and Interlock LEDs are ON. See [“Status LEDs” on page 18](#) to interpret their status condition.

General All chassis types must be installed on a level surface that is free from vibrations. The SuperK VARIA can be fastened to both metric and imperial optical tables. The ambient temperature surrounding the laser and VARIA should be stable and free from anything that could cause temperature fluctuations. Temperature changes and vibrations may affect the device operation and result in abnormal operation.



CAUTION: The SuperK VARIA is intended for use with the SuperK Class 4 lasers systems only. Using the SuperK VARIA with a laser source other than a SuperK laser may result in hazardous radiation exposure.



WARNING: To operate these systems, you must be familiar with laser safety regulations and have received instruction in the safe use of lasers.

Optical Connections

Following the steps in [Procedure 1](#), to insert the output collimator of the SuperK laser into the *Optical Input* receptacle of the SuperK VARIA.

Inserting the collimator **Procedure 1 Inserting a SuperK output collimator**

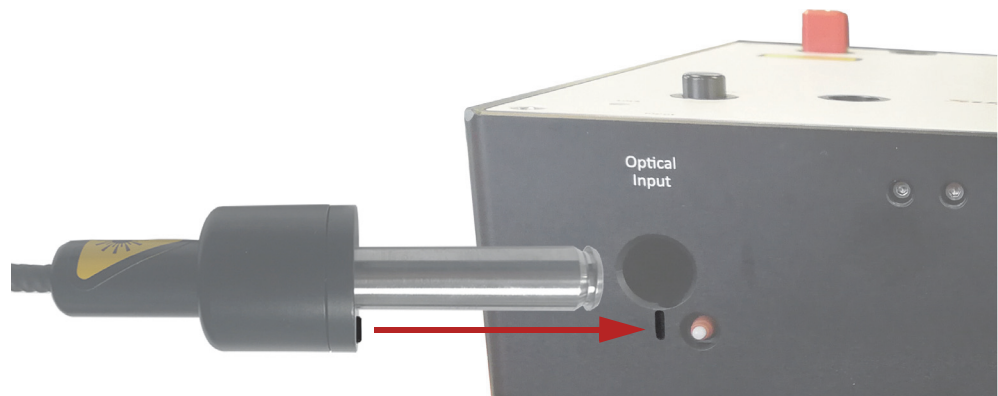
1. Disconnect power from the laser.
2. If not already installed, position the SuperK VARIA at its final operating location and securing it to a suitable mounting surface.
3. Partially insert the laser's output collimator barrel into the Optical Input receptacle as shown in [Figure 8](#).

Figure 8 Partially inserting the collimator



4. Holding the collar, rotate the collimator until the alignment key of the collimator aligns with the slot at the optical port of the chassis ([Figure 9](#)).

Collimator alignment key and slot



i **NOTE:** When the key is aligned with the slot, the axial orientation of the collimator is correctly aligned.

5. Push the collimator into the receptacle until its collar rests against the chassis. As you push it in, the collimator will encounter some resistance, and two distinct clicks as it locks in place.



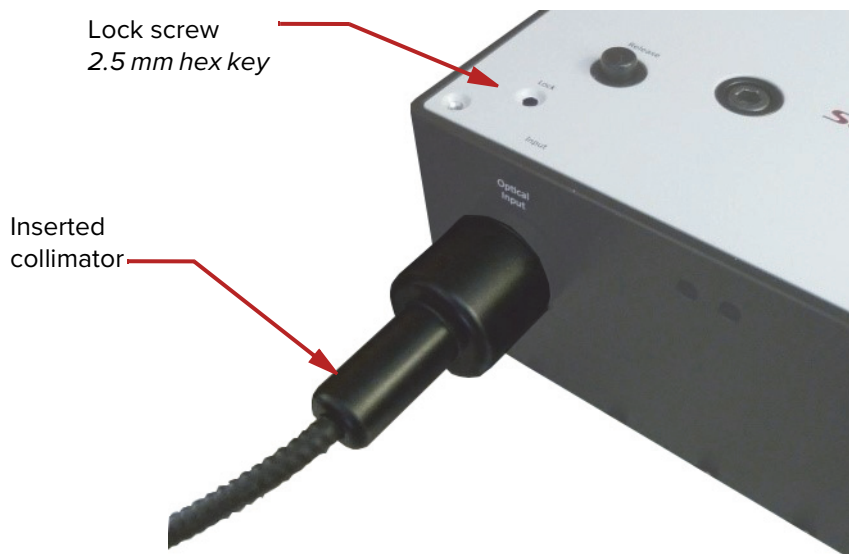
NOTE: Again, you may need to turn the collar slightly to align the collimator key with the alignment slot.

6. To secure the collimator in the receptacle, tighten the lock screw shown in [Figure 10](#) using a 2.5 mm hex key (Allen key).



CAUTION: Do not over tighten the lock screw, doing so may damage the threads.

Figure 9 Collimator lock screw



Electrical Connections

External bus For basic operation, connect the External bus of the SuperK laser to the Bus Input of the VARIA. To connect the bus:

1. Disconnect power from the laser.



CAUTION: If the laser is powered ON when connecting the external bus cable, DAMAGE can occur to both the laser and the VARIA.

2. Using a DB-15 male to female external bus cable (included with your laser or accessory), connect the *External bus* connector of the SuperK laser to the *Bus Input* connector of the VARIA.

Figures 11 and 12 show the connections for each of the devices.

Figure 10 Connecting the External bus - SuperK laser

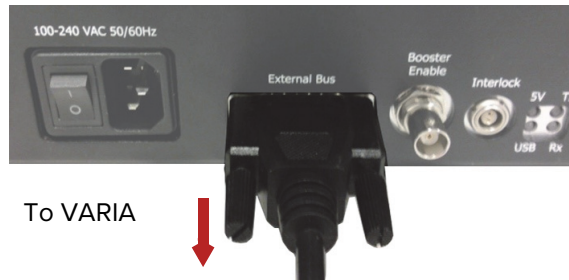
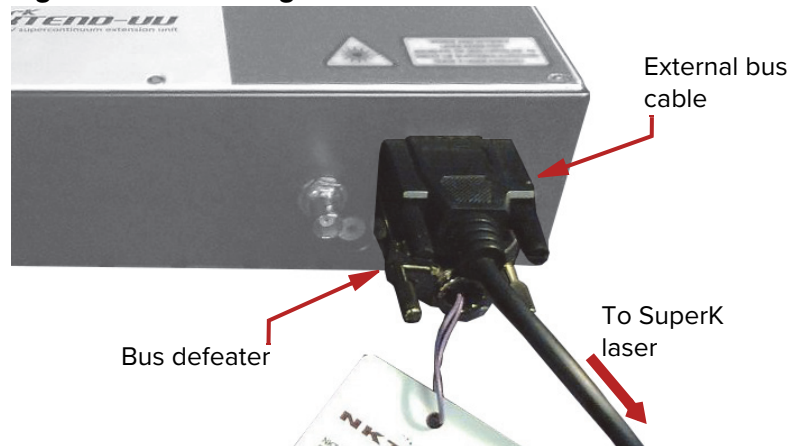


Figure 11 Connecting the External bus and bus defeater - VARIA



- Place the *Bus Defeater* (included with your laser or accessory) on the *Bus Through* connector of the VARIA - see [Figures 12 and 13](#).

Figure 12 Bus defeater



- NOTE:** If you do not terminate the External bus with an NKT Photonics bus defeater, the interlock circuit remains open and laser emission cannot be enabled.

Adding additional accessories

- If any additional accessories are to be connected to the SuperK laser, use an External bus cable to connect the *Bus Through* connector on the VARIA to the *External bus* connection on the other accessory.
- The last accessory in the External bus daisy chain requires the *Bus Defeater* to be placed on its *Bus Through* connector.

- NOTE:** To enable emission on a SuperK laser, the power supply and the door-switch interlock must be connected. Refer to the instruction manual for the SuperK laser system for more information.

- NOTE:** All bus cables used with the SuperK laser system must be shielded and no more than 3 meters in length.

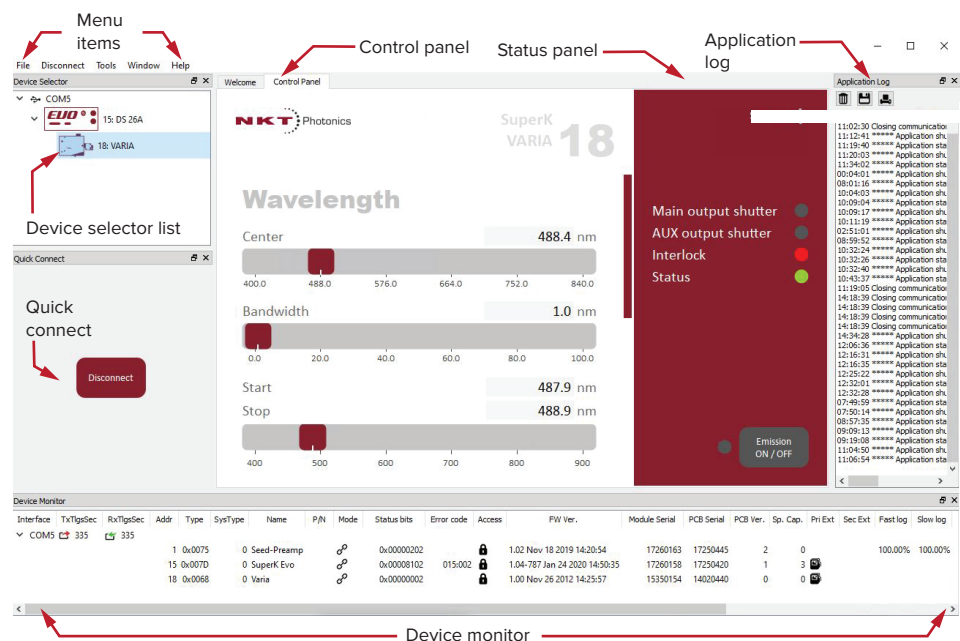
- NOTE:** When additional accessories are added to the External bus daisy chain, each device must have a unique bus address. For the VARIA, set the address using the address selector when next to the External bus connectors. (See [“Address selector”](#) on page 28.)

CONTROL overview

The CONTROL user interface includes multiple panels and a selection of menu drop down items in the upper left corner. Figure 14 shows CONTROL's main panels and menu; their functions are described in the table below. This chapter only describes CONTROL operations related to the SuperK VARIA, for all other functionality, refer to the specific SuperK documentation.

Panel	Function	See
Device Selector	Selectable list of connected devices (lasers and accessories) sorted by the PC port they are connected to.	Device Selector on page 28
Quick Connect	Provides a button when clicked, scans all available PC ports for connected NKTP products.	Refer to SuperK laser documentation.
Status Panel	This panel displays the selected device status, emission control and a CONTROL settings menu.	Status Panel on page 29
Menu Items	Five drop down menus with multiple functions.	Refer to SuperK laser documentation.
Control Panel	The control panel provides adjustable controls for the laser and accessories selected. The SuperK Extreme provides configuration controls for current, repetition rate and trigger delay.	Control panel on page 33
Application Log	This panel displays a debugging log that can be saved to a file.	Refer to SuperK laser documentation.
Device Monitor	To also help debugging issues, this panel displays multiple port and device module parameters.	Refer to SuperK laser documentation.

Figure 14 CONTROL panel navigation



Device Selector

You can find the list of SuperK nodes that CONTROL is currently communicating with in the Device selector. To manage any device, click on its corresponding icon. When the icon is highlighted blue, it indicates that the *Control panel* and *Status panel* are displayed for that device. In the device selector list, the VARIA is represented by the icon shown in Figure 15.

Figure 15 Device selector icon

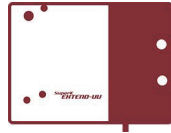
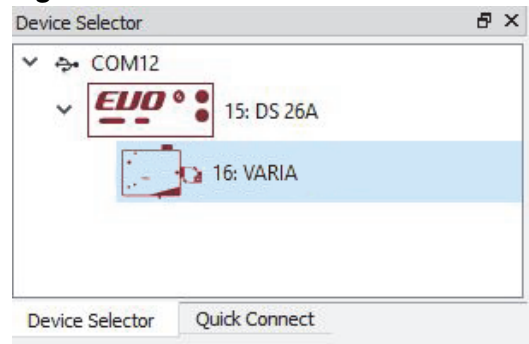


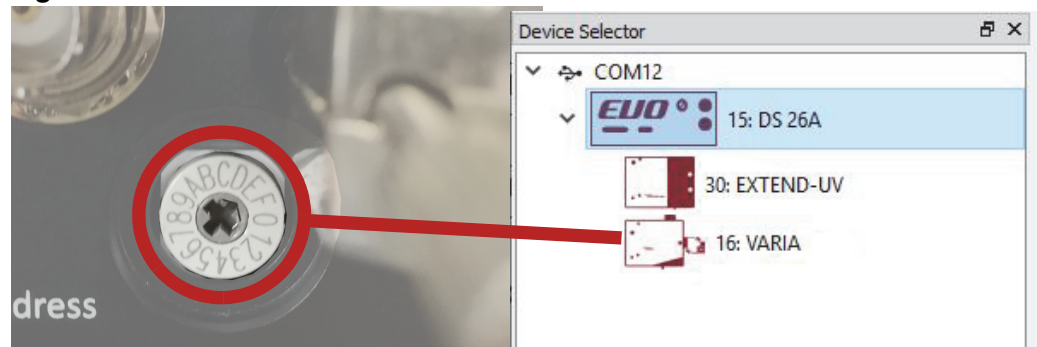
Figure 16 shows the device selector list with an VARIA selected, indicated by the blue highlighting.

Figure 16 Device selector



Address selector When multiple accessories are used with a single SuperK laser, the laser’s External bus connects the accessories in a daisy chain topology. For each device, the address selector wheel must be set to one of 16 (0x0 to 0xF) unique addresses. Figure 17 shows a case where multiple accessories share the External bus.

Figure 17 Device selector set to 0xE bus address

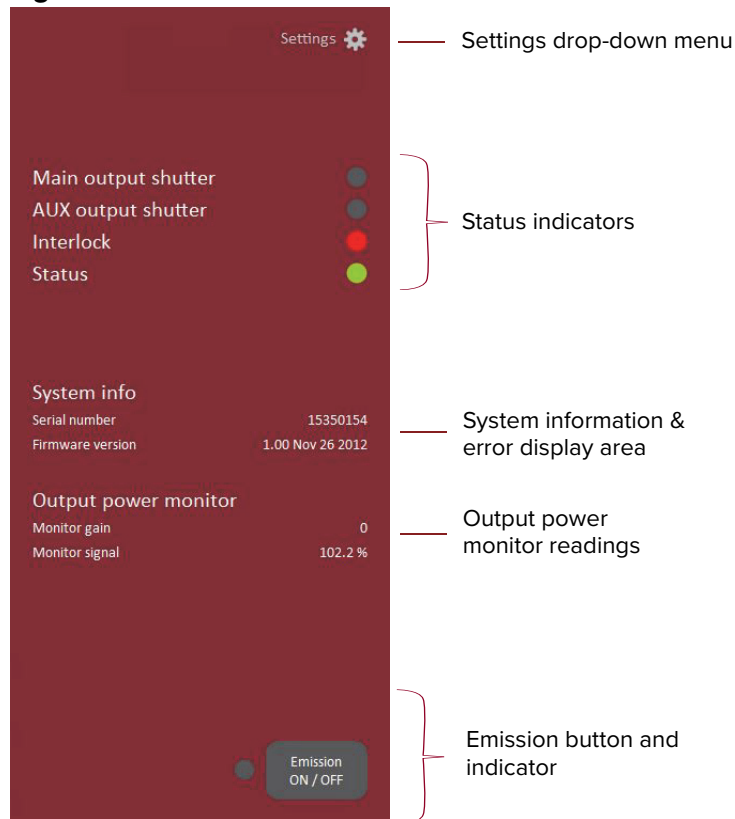


CAUTION: Only turn ON the SuperK laser and External bus connected accessories after all accessories are configured with a UNIQUE BUS ADDRESS.

Status Panel

The Status Panel for the VARIA provides status indicators, error messages, an emission control button, and a CONTROL settings menu.

Figure 18 Status Panel



Status Indicators The panel displays the following indicators:

Main output shutter

Indicates the position of the mechanical shutter for the IR output shutter. The shutter is either in the closed or open position.

- ON Green – the Main output shutter is in the open position, laser emission can pass through the aperture.
- OFF Grey – the Main output shutter is in the closed position, emissions are blocked.

AUX output shutter

Indicates the position of the mechanical shutter for the Visible output shutter. The shutter is either in the closed or open position.

- ON Green – the AUX output shutter is in the open position, laser emission can pass through the aperture.
- OFF Grey – the AUX output shutter is in the closed position, emissions are blocked.

Interlock

Indicates the status of the Interlock circuit and whether emissions can be turned on or not. The indicator will be either:

- ON Red – the interlock circuit is open or shorted to ground – No emissions allowed
- ON Green – the interlock circuit is closed and reset – emissions allowed

To clear the ON Red indicator, close the interlock circuit and reset it. Any shorts to ground or circuit opens must be removed or the Interlock will remain ON red.

Status

Indicates the operational status of the laser. The indicator has the following states:

- ON Green – The VARIA is ready for operation.
- ON Red – The VARIA has experienced a fault and has shutdown. An error code is displayed underneath the Status indicator. Contact NKT Support if the fault cannot be cleared - see [“Support Contact Details” on page 37](#).

System Info The System Info section shows the following:

- VARIA Serial number
- VARIA Firmware version

Output power monitor If an optional output power monitor is fitted to your VARIA, the gain setting and monitor signal levels can be shown in the Status panel. To show the setting and level, access the [“View”](#) menu and click the Output power monitor check box.

Emission button The emission button turns the SuperK laser emission ON or OFF. The button indicator turns ON RED when laser emissions are generated. Otherwise, it will be OFF Grey. This button operates identically to the button available in the CONTROL status panel of the SuperK laser. Refer to the SuperK laser documentation for further information on managing emission.

Control settings


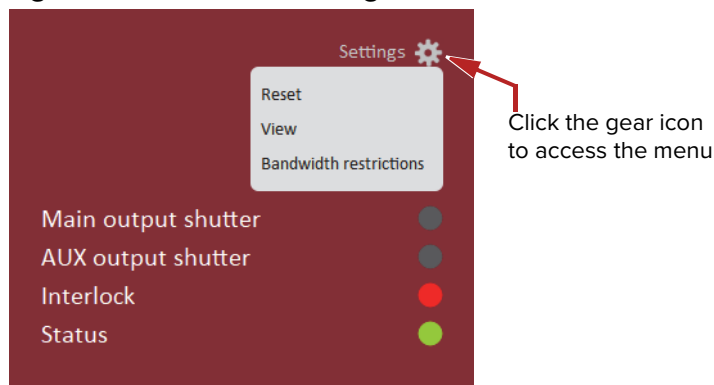
The CONTROL settings are accessible by clicking the gear icon  in the upper right corner of the Status panel. Clicking the gear icon provides access to the *View* settings menu as shown in [Figure 19](#):

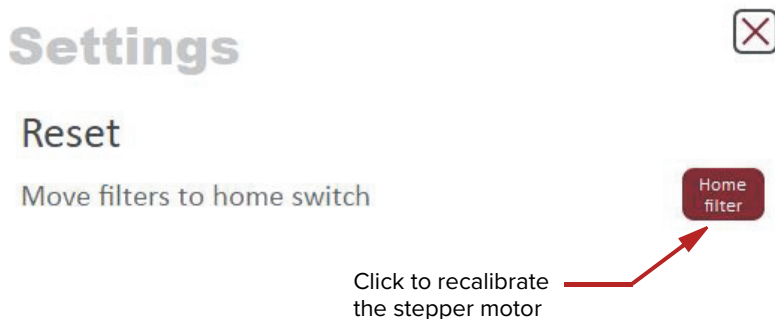
Figure 19 CONTROL settings



Reset The VARIA is equipped with a stepper motor to adjust its optics. After a long period of use, access this menu to reset and calibrate the stepper motor.

Home filter – click button to reset and calibrate the stepper motor function.

Figure 20 Reset settings

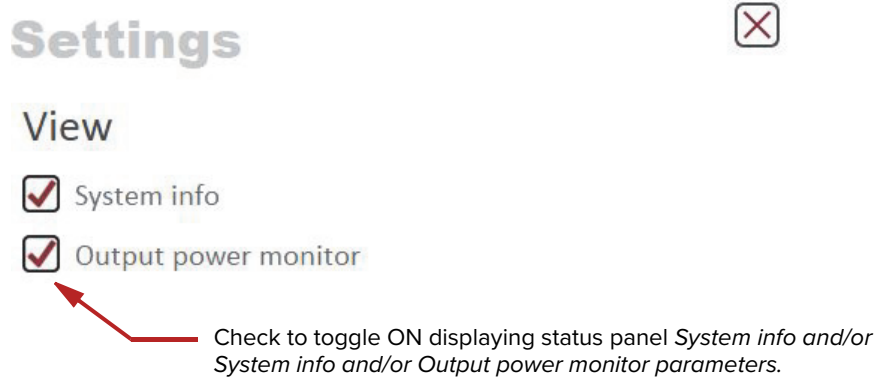


View The *View* settings toggle ON or OFF the display of VARIA system information in the status panel.

System info – check the box next to “System info” to toggle ON displaying the system information within the status panel.

Output power monitor – check the box next to “Output power monitor” to toggle ON the display of the gain setting and monitor signal level in the status panel.

Figure 21 View settingsB

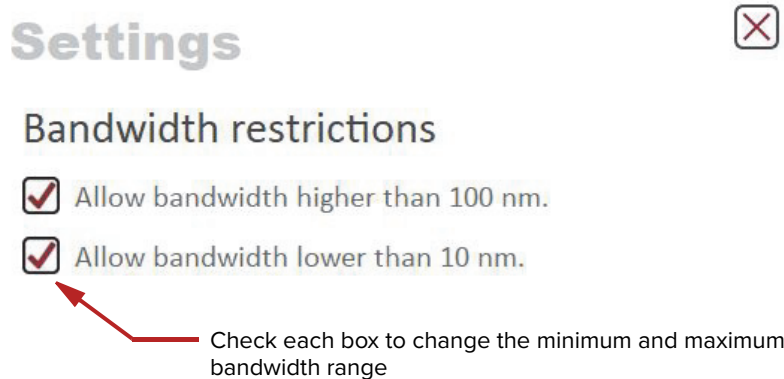


Bandwidth restrictions These two settings allows the output bandwidth to be greater than 100 nm or less than 10 nm

Allow bandwidth higher than 100 nm – check the box to increase the bandwidth to a maximum of 440 nm. Using bandwidths greater than 100 nm results reduces the quality of the output spectrum.

Allow bandwidth lower than 10 nm – check the box to allow a bandwidth that is less than 10 nm. Using bandwidths smaller than 10 nm reduces the quality of the output spectrum.

Figure 22 Bandwidth restriction settings

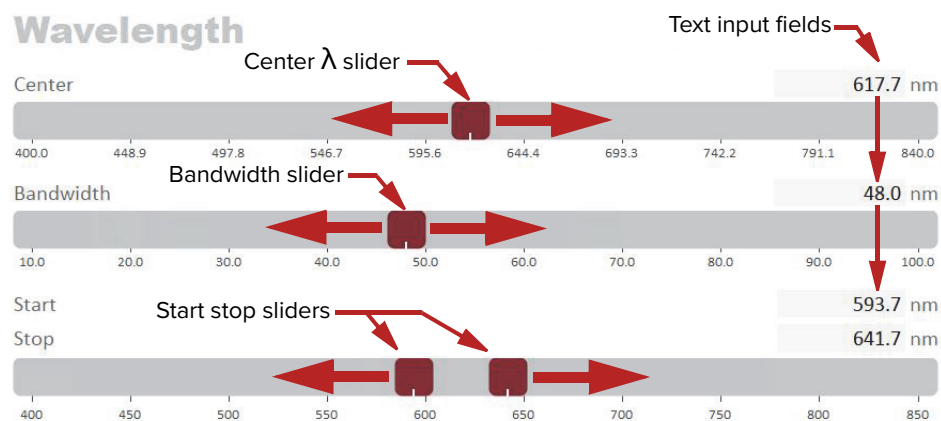


Control panel

The Control panel displays the VARIA *Wavelength* settings adjusted with slider controls or the individual text input fields. The standard *Wavelength* settings configures the:

- *Center (wavelength)* – slider control for the center wavelength of the filtered output. The wavelength is set using either the slider control or a text input field for direct input of the wavelength. **Range:** 400 to 840 nm
- *Bandwidth* – slider control for the total bandwidth of the filtered output spectrum in nanometers. The bandwidth will be equally distributed on either side of the set center wavelength. **Range:** 10-100 nm
- *Start/Stop* – you can manual set the lower and upper bandwidth limits using the two start stop slider controls. Setting the two sliders will automatically adjust the center wavelength and bandwidth controls. **Range:** you can set the sliders to almost all values between 400 and 840nm with a 10 to 100 nm bandwidth.

Figure 23 Wavelength controls – click-hold and slide



NOTE: When a new center wavelength and bandwidth is configured, the VARIA immediately makes the proper adjustments to filter the newly set emission range.

Text input

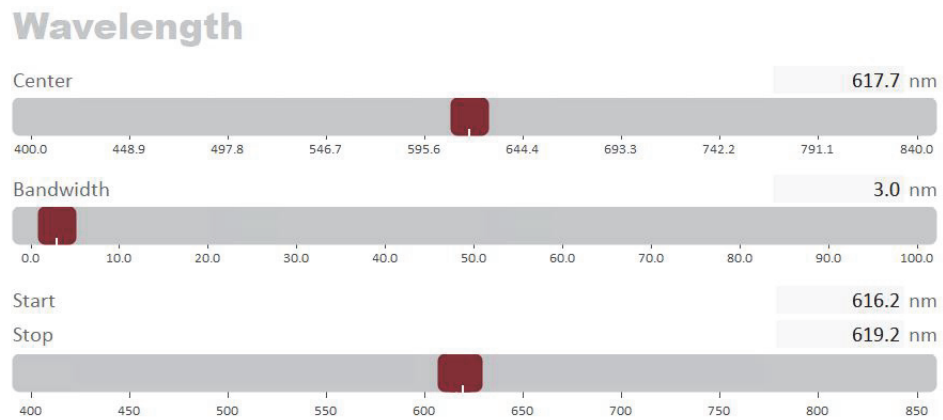
On the upper right side of each slider control is a text input field. You can directly enter the setting values using these fields. Note the *Start Stop* setting has two fields. The upper field is the lower bandwidth limit wavelength and the lower field is the upper bandwidth limit.

Using a bandwidth less than 10 nm

You can reduce the bandwidth output from the VARIA to below 10 nm. Below the 10 nm limit, the quality of the output spectrum is diminished. Use the Status panel

“Bandwidth restrictions” settings to change the Bandwidth slider scale to permit the reduced bandwidth as shown in Figure 24.

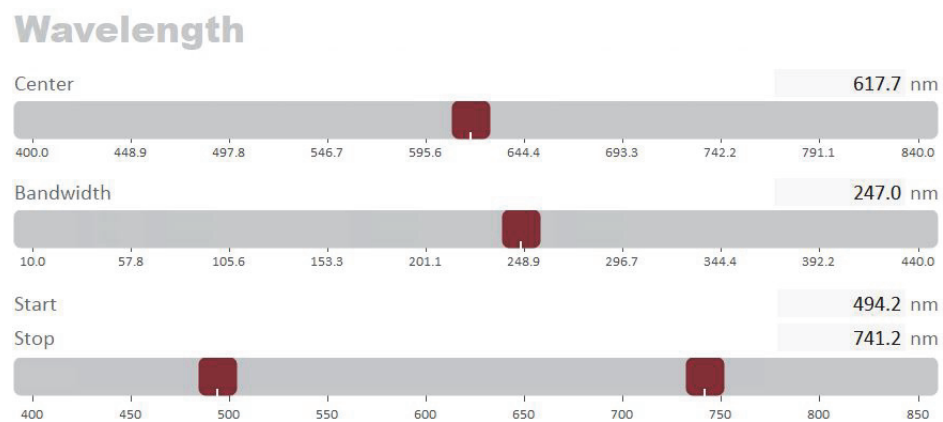
Figure 24 Reduced *Bandwidth* set to 3.0 nm



Using a bandwidth greater than 100 nm

You can increase the bandwidth output from the VARIA to beyond 100 nm. Beyond the 100 nm limit, the quality of the output spectrum is diminished. Use the Status panel “Bandwidth restrictions” settings to change the Bandwidth slider scale to permit the increase in bandwidth as shown in Figure 25.

Figure 25 Increased *Bandwidth* set to 247.0 nm



NOTE: The VARIA output center wavelength can only be adjusted within an operating range specific to the model. Center wavelengths entered outside the range, are replaced by a wavelength at the nearest limit of the operational range.

A Specifications

Table 3 Interfaces

All Chassis Models	
External bus	DB-15 Female
Monitor	BNC (Optional - Custom feature, contact NKT Photonics)

Table 4 Mechanical dimensions

Specification	
Size (H x W x D)	68 x 272 x 212 mm (2.68 x 10.71 x 8.35 in)
Weight	7.9 kg (17.4 lb)

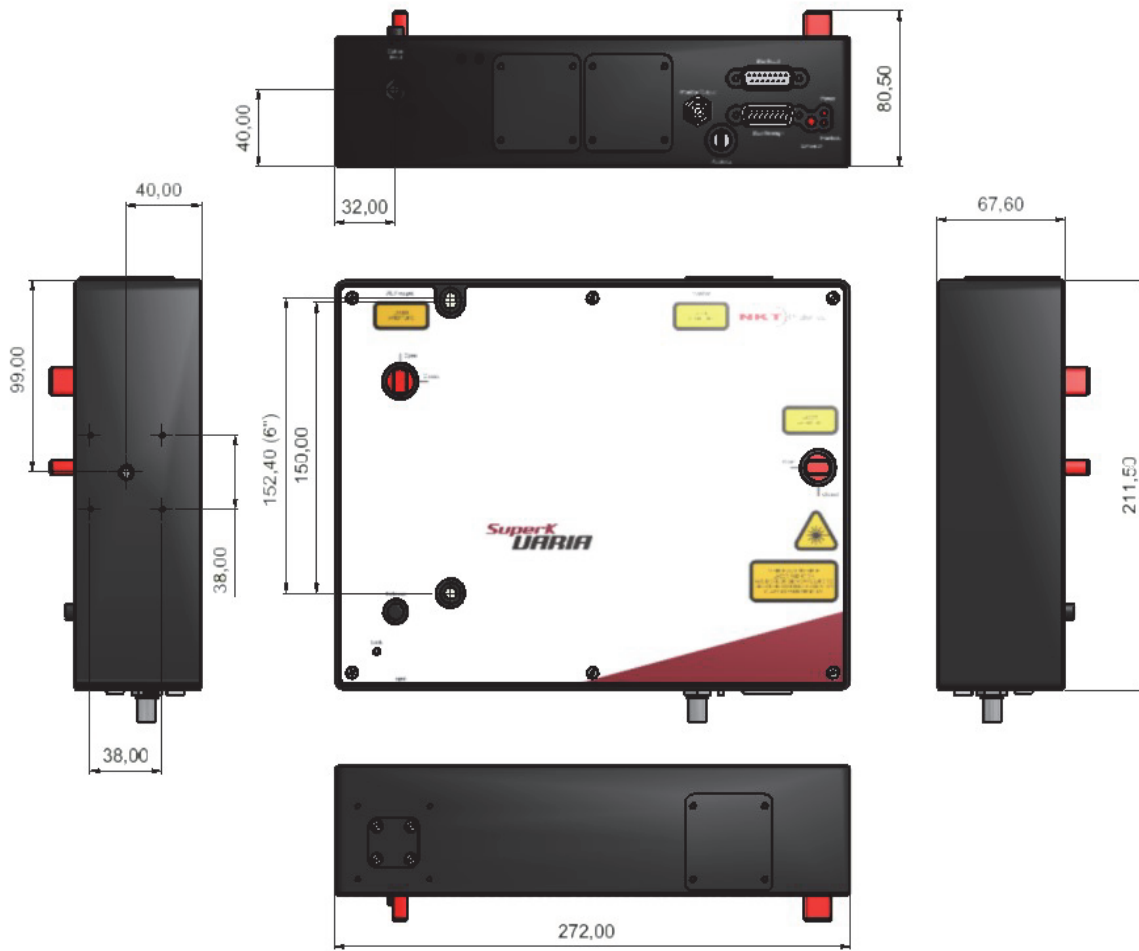
Table 5 Operating and storage environment

Specification	
Operating Temperature	18°C to 28°C (64°F to 82°F)
Storage Temperature	-20°C to 50°C (-4°F to 122°F)
Operating Humidity (non-condensing)	20 to 80%
Operating Altitude	3000 m maximum
Operating Air Pressure	700 hPa to 1060 hPa

Table 6 Safety and regulatory compliances

Safety	Regulatory
EN 60825-1:2014: Safety of laser products Part 1: Equipment classification and requirements [Laser Class 4]	2014/30/EU: EMC directive 2014/35/EU: Low Voltage directive
EN 61010-1:2010: Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1: General requirements	EN 61326-1:2013: Electrical equipment for measurement, control and laboratory use EMC requirements – Part 1: General requirements

Figure 26 Mechanical dimensions



B Service and Support Information

Servicing

The accessory has no user serviceable components. In case of malfunction, contact NKT Photonics using the support channels in section “[Support Contact Details](#)”.



CAUTION: Do not open the accessory chassis. The accessory is equipped with warranty labels (see [Figure 27](#)) on the covers of the its chassis. The warranty is void if the system is opened.



CAUTION: The accessory contains electro-static discharge (ESD) sensitive components. To avoid permanent ESD damage, use ESD protection precautions when handling the accessory. Always connect the accessory’s earth point to a ground earth within your facility.

Figure 27 Warranty seal



.Opening the chassis There are no user serviceable components inside the accessory chassis. Should your accessory malfunction, and it cannot be serviced on site, it must be shipped to the NKT Photonics office in Denmark.

WARRANTY VOID IF REMOVED label The unit is sealed with a label “WARRANTY VOID IF REMOVED”. It is strictly prohibited to remove the chassis cover

Support Contact Details

For technical or general support, NKT Photonics can be contacted for help regarding issues and questions with your accessory.

Online Support Web-page

1. Go to:

<https://www.nktphotonics.com/support/>

2. Scroll down and click or press:



Contact Support

3. Select the type of help required, fill in the form, and click or press *Submit*.

Shipping Address NKT Photonics A/S
Blokken 84
DK-3460 Birkerød
Denmark

C CONTROL Software

Installing CONTROL

Download the software from:

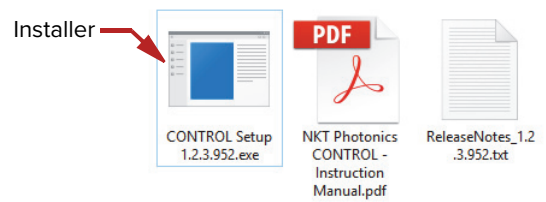
<https://www.nktphotonics.com/support/>

Follow the steps in [Procedure 2](#).

Procedure 2 Installing CONTROL

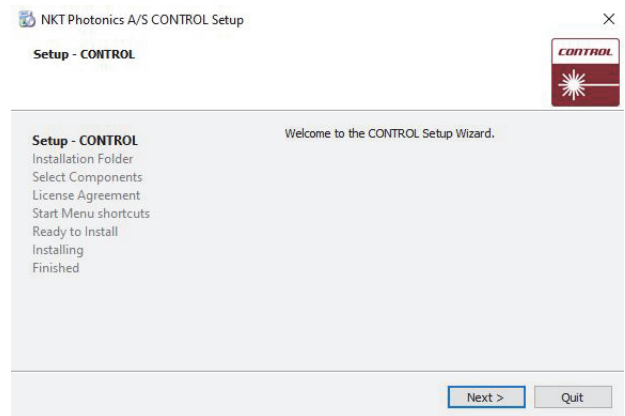
Action

- 1 On the PC, launch the installer package and then double click the installer icon.



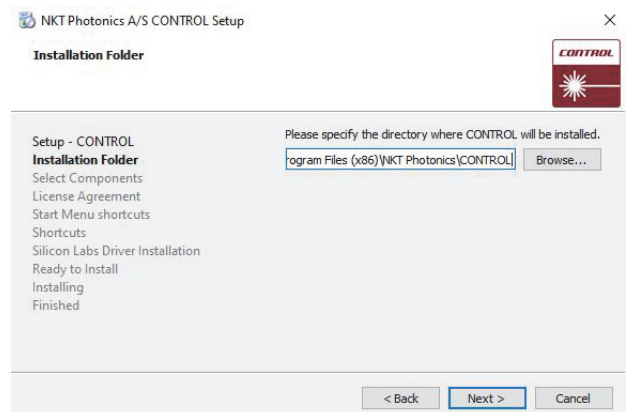
- 2 The installation wizard appears.

Click *Next* to continue.



- 3 Accept to use the default installation directory or select another directory by clicking the *Browse* button.

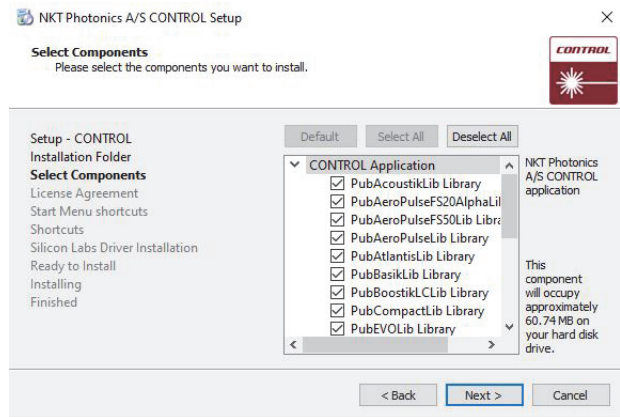
Click *Next* to continue.



Action

- Uncheck the components you do not require. By default, all components are installed.

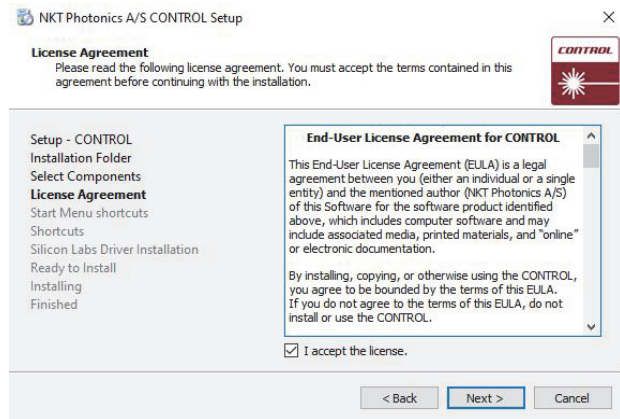
Click *Next* to continue.



- Read the End-User License Agreement, and check “I accept the license.” box.

Not checking the box ends the installation wizard.

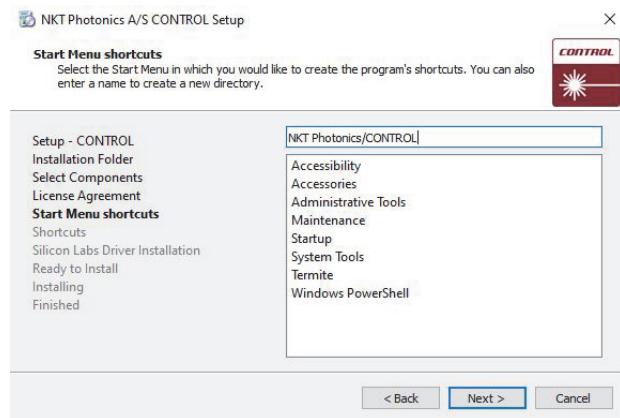
Click *Next* to continue.



- The wizard creates a start menu folder with program short-cuts.

Use the default name or enter a new name for the folder.

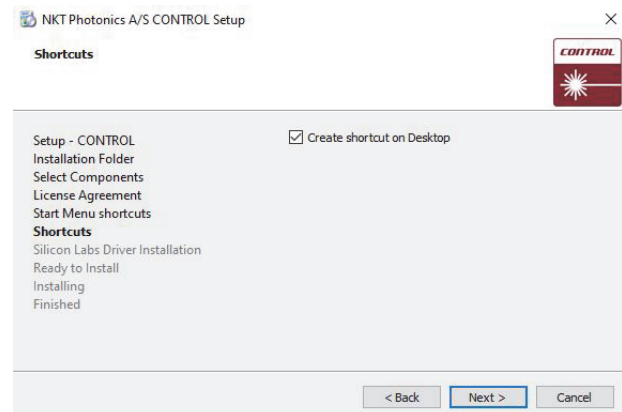
Click *Next* to continue.



Action

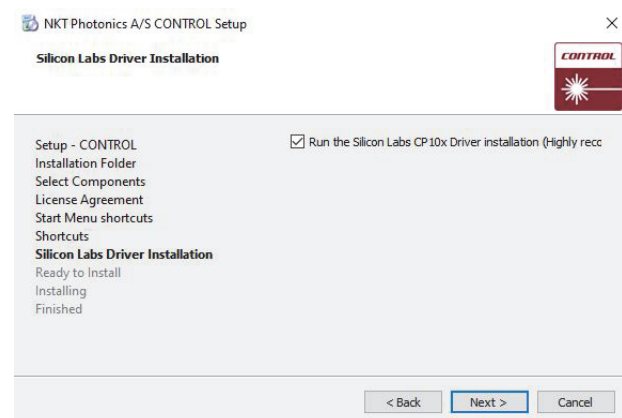
- 7 Check the box to create a desktop shortcut to access Control.

Click *Next* to continue



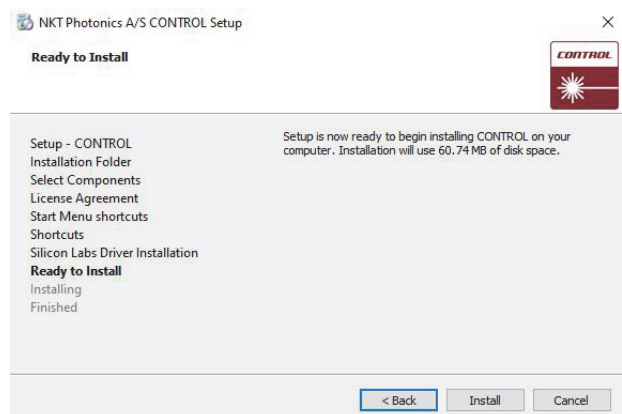
- 8 Check the 'Run the Silicon Labs CP10x driver installation' box and click *Next*.

Note: If you do not have the driver installed USB connectivity will fail.



- 9 Click *Install* to install NKTP CONTROL software on your PC.

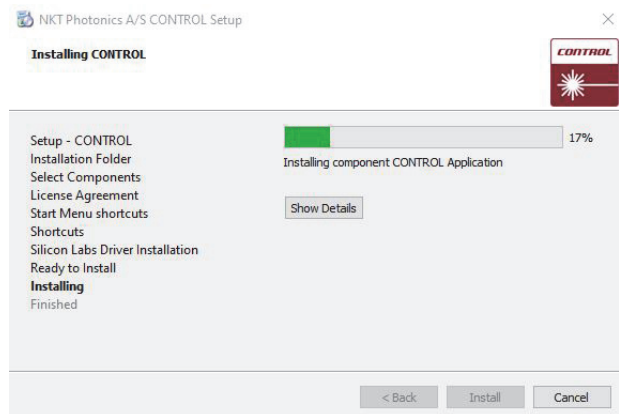
Click *Cancel* if you want to abort the installation..



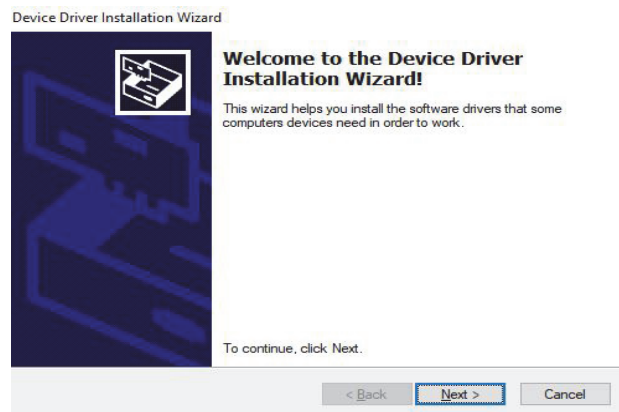
Action

10 The wizard displays a progress meter for the installation.

Note: a normal install should only take a few seconds.

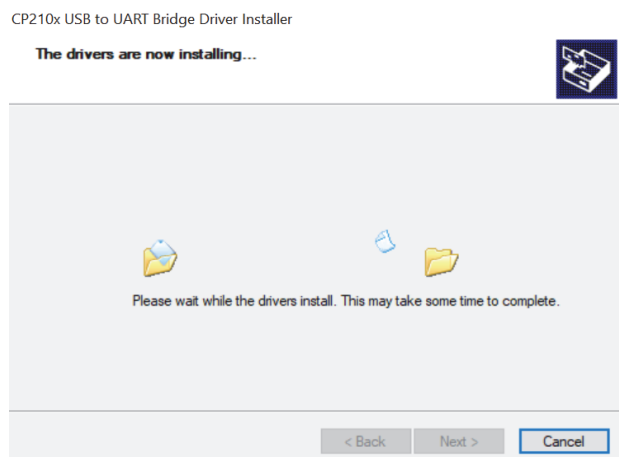


11 Click *Next* to install the UART drivers for the PC USB port.



12 The drivers are installed.

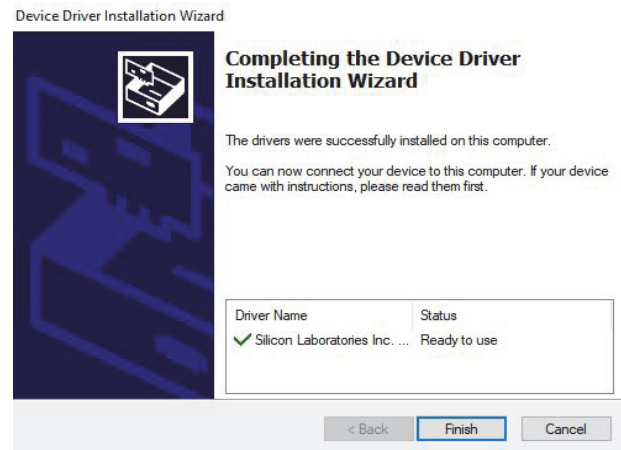
Note: Depending on your computer this occurs so fast you may not see this.



Action

13 The Silicon Labs drivers is installed successfully.

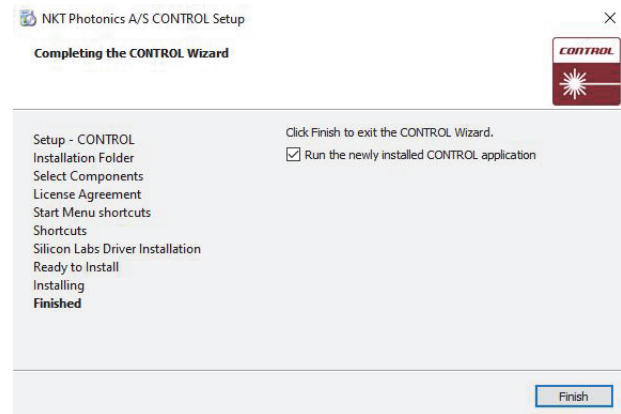
Click *Finish* to end the driver installation.



14 CONTROL is now installed.

Check the Run box to launch CONTROL when the *Finish* button is clicked.

Click *Finish* to end the installation wizard.



Item:
Customer Revision:
NKT Photonics Revision:
Release Date:

800-615-01
1.3
3-0
10-2023

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