

# SuperK COMPACT

Compact single mode white light laser



# Broadband and ultra-bright

## Ideal for SLED and ASE replacement

The SuperK COMPACT is a cost-efficient turn-key supercontinuum white light source with a wide output spectrum covering the entire 450-2400 nm region - from visible to infrared.

Its single mode output has a brightness many orders of magnitude larger than other white light sources, such as incandescent lamps - and it has far more bandwidth than ASE sources and SLEDs.



## SuperK COMPACT

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### Applications

Spectroscopy

CWDM/DWDM

Component test

Optical Coherence

Tomography

Fiber and grating  
characterization

Superluminescent diode  
(SLED) source alternative

Amplified spontaneous emis-  
sion (ASE) source  
alternative

# From visible to infrared

The SuperK COMPACT is a cost-efficient turn-key supercontinuum white light source with a wide output spectrum covering the entire 450-2400 nm region.

## **Broad output and ultra-bright**

Its single mode output has a brightness many orders of magnitude larger than other white light sources, such as incandescent lamps - and it has far more bandwidth than ASE sources and SLEDs.

## **External trigger and low jitter**

The SuperK COMPACT can be triggered externally and synced - with low jitter - up to 20 kHz. The trigger signal can be provided to a standard coax input or to the industrial trigger input which is galvanically isolated.

## **Graphical user interface and lots of accessories**

The SuperK COMPACT is easily operated via our CONTROL software. It is compatible with all SuperK filters and accessories, such as the SuperK SPLIT and SuperK CONNECT fiber delivery accessory range, for easy delivery and filtering/splitting of the light.

## **Thousands of hours maintenance-free use**

The all-fiber architecture ensures a stable 24/7 operation and a maintenance-free lifetime of thousands of hours backed by our 2-year warranty.

## **Very versatile**

The SuperK COMPACT can be found in laboratories around the world where it is the daily driver for many users within applications like component characterization, test & measurement, spectroscopy and OCT or simply as a general purpose laboratory white light source.

# SuperK COMPACT

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## **Features**

Cost-efficient broadband source

High brightness and long lifetime

Visible to infrared in one module

Input pulse trigger

Variable repetition rate

Flexible accessory range

Single mode fiber termination

Alternative to ASE sources, lamps, and SLEDs

Simple and intuitive user interface via NKT Photonics CONTROL

Plug and Play with all SuperK accessories

Robust and compact industrial design

Maintenance-free 24/7 operation

# Specifications

## Typical output spectrum



<b>Repetition rate [Hz]</b>	Variable 1 Hz to min. 20 kHz
<b>Spectral coverage [nm]</b>	450-2400
<b>Total power [mW] <sup>2</sup></b>	> 110
<b>Total visible power (450-850 nm) [mW] <sup>2</sup></b>	> 20
<b>Total power stability [%] <sup>1</sup></b>	< ± 1.0
<b>Output pulse width [ns]</b>	< 2
<b>Pulse-pulse jitter (standard dev.) [µs] <sup>2</sup></b>	< 2
<b>Polarization</b>	Unpolarized
<b>Beam quality, TEM<sub>00</sub> <sup>1</sup></b>	M2 < 1.1
<b>Beam diameter, collimated [mm]</b>	1 @ 530 nm 2 @ 1100 nm 3 @ 2000 nm

<sup>1</sup> Contact us for ± 0.5 %. <sup>2</sup> Repetition rate dependent.

# SuperK COMPACT

## NKT Photonics CONTROL Software

Like other NKT Photonics lasers, the SuperK COMPACT can be controlled by our intuitive CONTROL software that gives easy access to all laser functions.

The software automatically detects all units attached to the computer. You can control the source and any filtering accessories from CONTROL. It is easy to use and supports touch input as well as traditional mouse+keyboard control.

# Specifications

## Mechanical/Electrical/Environmental

<b>Laser output</b>	Gaussian, single mode
<b>Output termination <sup>1</sup></b>	Collimator, FC/PC or FC/APC
<b>Computer interface</b>	USB
<b>Power supply requirements [VAC, Hz]</b>	100-240 V, 50-60 Hz
<b>Power consumption [W]</b>	Up to 40
<b>Pulse signal output</b>	Analog and digital
<b>Trigger input</b>	Standard industrial, galvanically isolated
<b>Door interlock connector</b>	2-pin LEMO 0B
<b>External bus interface</b>	15-pin D-sub
<b>Operation temperature [°C]</b>	18 – 30
<b>Storage temperature (non-condensing) [°C]</b>	5 – 50
<b>Humidity [% RH]</b>	20 – 80
<b>System cooling</b>	Air
<b>Dimensions (WxHxL) [mm<sup>3</sup>]</b>	220.5 x 93 x 367
<b>Weight [kg]</b>	3.8

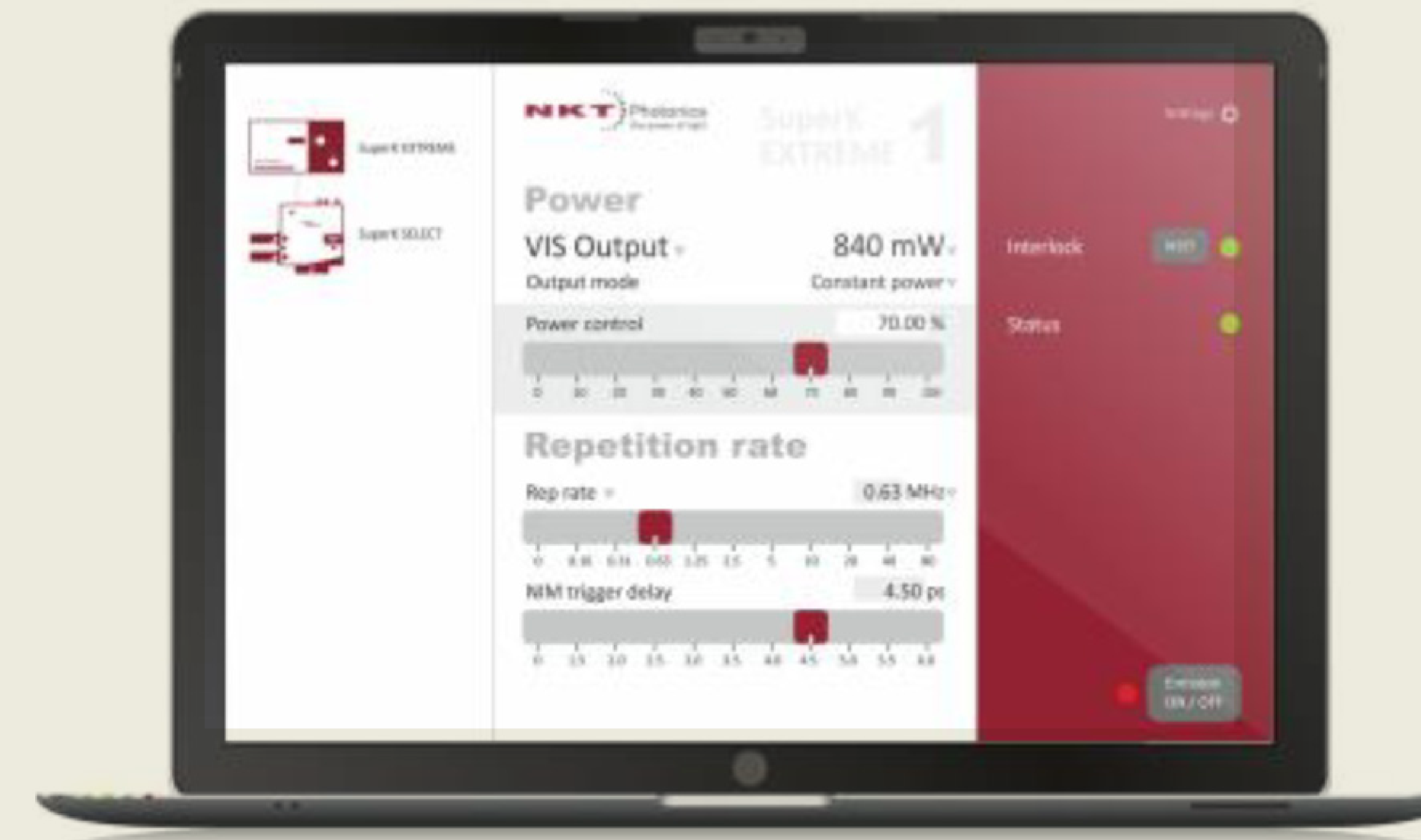
<sup>1</sup> Contact us for standard single mode output fiber.

# SuperK COMPACT

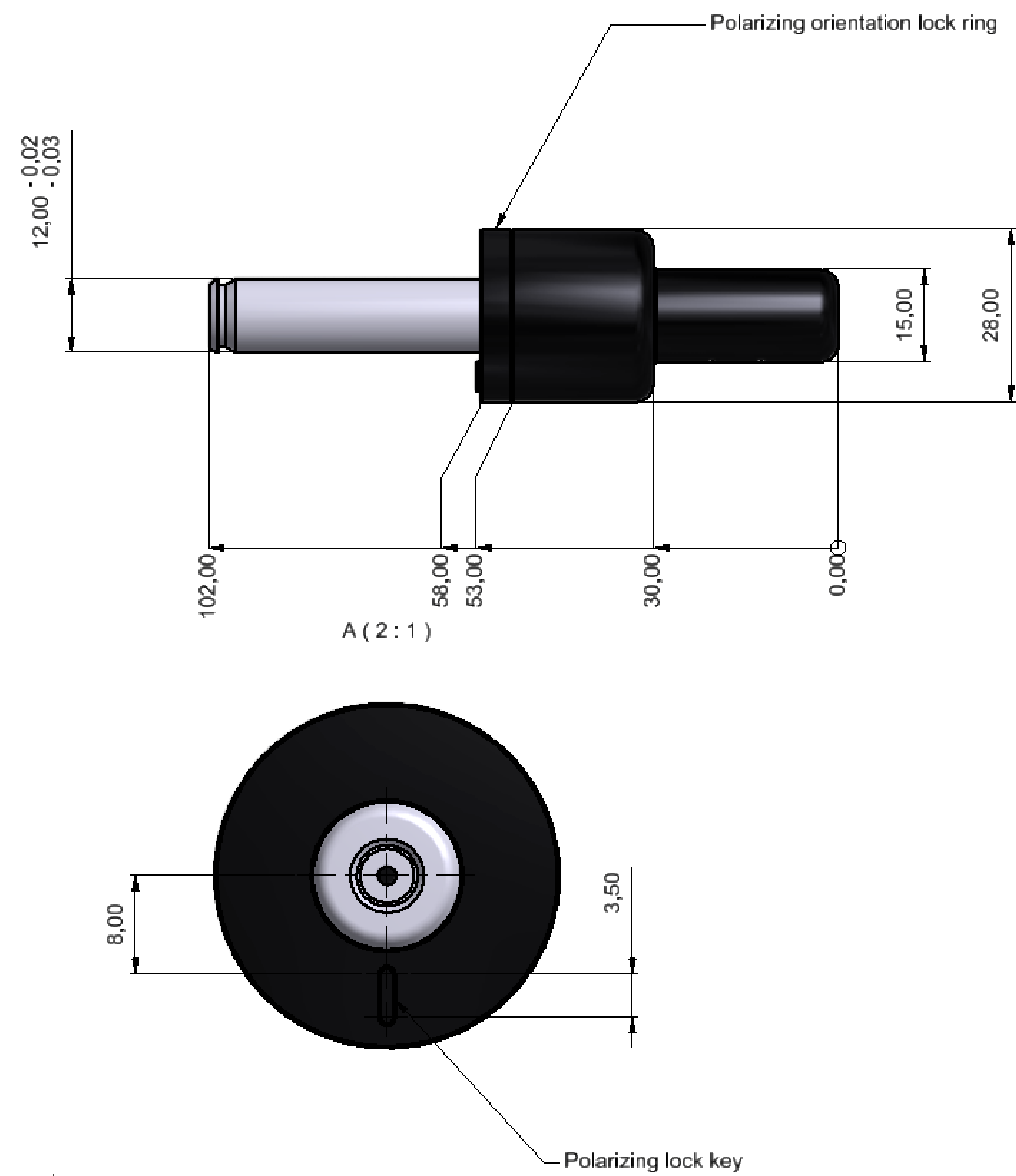
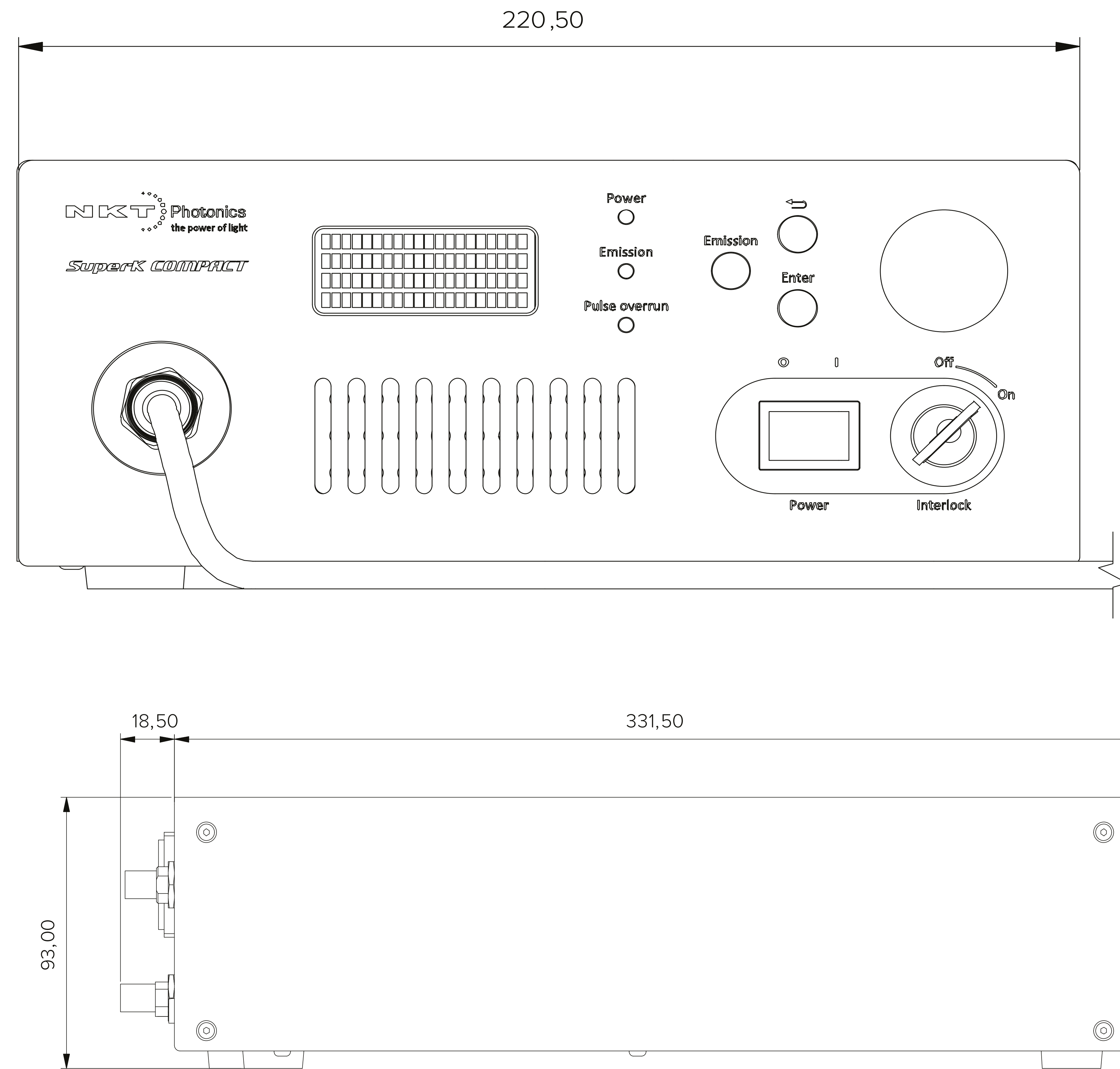
## Software Development Kit (SDK)

The free software development kit (SDK) enables control of the SuperK CHROMATUNE laser using third party software and hardware.

The SDK contains a full description of the communication protocols as well as LabView drivers and C++/C# source code.



# Technical Drawings



## SuperK COMPACT

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.



# SOLUTIONS FOR INNOVATORS