NKT Photonics

SuperK EVO HP

High-power supercontinuum fiber laser platform

High power, high repetition rate and NIM trigger

Ideal for Fluorescence-Lifetime Imaging Microscopy

The SuperK EVO EU-4 is a range of cost-efficient supercontinuum fiber lasers based on our extremely reliable supercontinuum technology and are designed for easy end-user control and maintenance-free operation.

With its NIM trigger and a repetition rate of 20 MHz, the EVO is perfectly suited for lifetime applications such as FLIM.

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Applications

Microscopy

Spectroscopy

Industrial metrology

Fluorescence lifetime imaging

Optical inspection and imaging

General illumination

Characterizations of optical components and materials

Ease of use

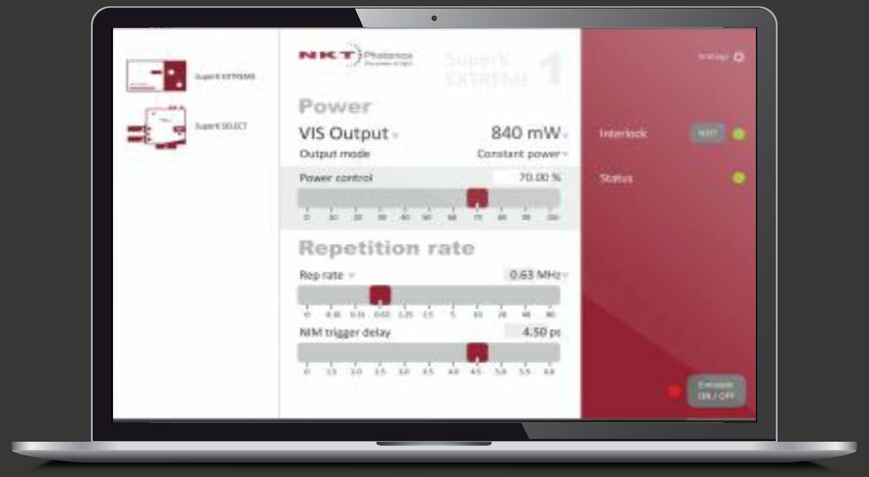
Cost-efficient, reliable, and maintenance-free
The high-power SuperK EVO is a range of cost-efficient supercontinuum fiber lasers based on our extremely reliable supercontinuum technology and are designed for easy end-user control and maintenance-free operation.

NIM trigger and high repetition rate
With its NIM trigger and a repetition rate of 20 MHz, the EVO is perfectly suited for lifetime applications such as FLIM.

The output spectrum covers 415-2400 nm and comes fiber-delivered through a broadband collimator.

Graphical user interface and software development kit
The SuperK EVO is compatible with all existing SuperK filters and accessories. An utmost user-friendly operation through our NKT Photonics CONTROL software or a direct interface through the free software development kit.

OEM version available
For OEM integration, a smaller version is available upon request. Contact your Sales Manager for information on our capabilities.



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NKT Photonics CONTROL

Like other NKT Photonics lasers, the SuperK EVO 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+keybord control.

Benefits

Features

Versatile cost-efficient supercontinuum platform
Robust and compact industrial design
Benchtop and OEM models
Flexible cooling solutions for OEM models: Air or water
Free software development kit
Simple and intuitive user interface via NKT Photonics CONTROL
Plug and Play with all SuperK accessories
Maintenance-free 24/7 operation

Model	EU-4
Repetition rate	20 MHz
Spectral coverage	415 - 2400 nm
Total power	≈ 2 W
Visible power	≈ 400 mW
Power stability	± 1.0 %

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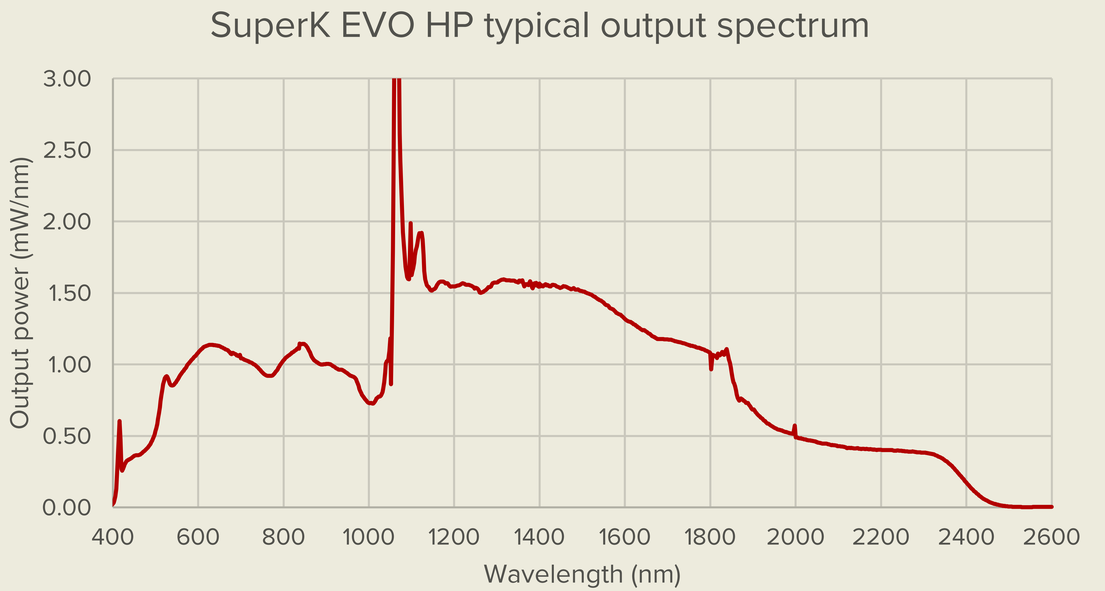
Support and warranty

Before shipping, all our SuperK lasers undergo an extensive burn-in to ensure performance and conformity to specifications. Our systems boast over 10,000 hours of continuous lifetime and underlines the high reliability of our NKT Photonics Crystal Fiber technology.

Lifetime and service
The solid-state, all-fiber architecture ensures a stable 24/7 operation and a maintenance-free lifetime of thousands of hours.
Intended for industrial use, its rugged and compact design make it easy to mount and handle.

Performance

Typical output spectrum



Specifications

Optical

Model	EU-4
Repetition rate [MHz]	20
Spectral coverage [nm]	415 - 2400
Spectral power density [mW/nm]	0.3 @ 450 nm 0.8 @ 532 nm 1.0 @ 650 nm 0.9 @ 780 nm 1.0 @ 800 nm
Total power [W]	≈ 2
Visible power (350-850 nm) [W]	≈ 0.40
Total power stability [%]	± 1
Cut-in wavelength [nm]	415
Polarization	Random
Beam quality [1]	Diffraction limited
Beam diameter [mm]	≈ 1 @ 532 nm ≈ 2 @ 110 nm ≈ 3 @ 2000 nm
Fiber output	Colimated

Electrical/Mechanical

Model	EU-4
Output fiber length [m]	1.5
Computer interface	USB 2.0/RS-232/Ethernet
Sync (trigger) output	NIM
Power supply requirements [V DC]	24
Power consumption [W] [2]	Up to 60
Door interlock connector [3]	2-pin LEMO
External bus interface	15 D-sub
Operation temperature [°C]	18 - 30
Storage temperature [°C]	10 - 55
System cooling	Air [4]
Dimensions (WxHxL) [mm]	200 x 166.5 x 325
Weight [kg]	12

[1] > 450 nm. [2] Power consumption depends on the total output power. [3] SuperK EVO is a class 4 laser and required to be connected to a door interlock/circuit. [4] Internat fan at a minimum airflow of [80] m^3/hour is needed.

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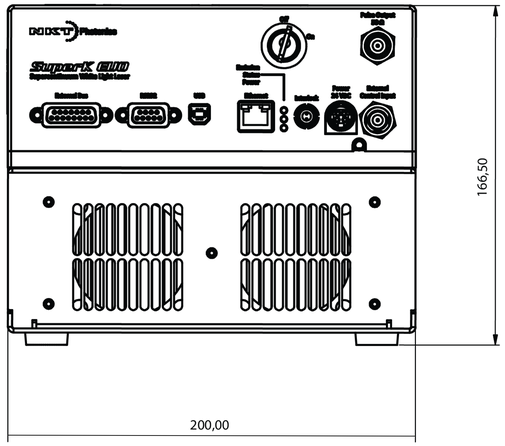
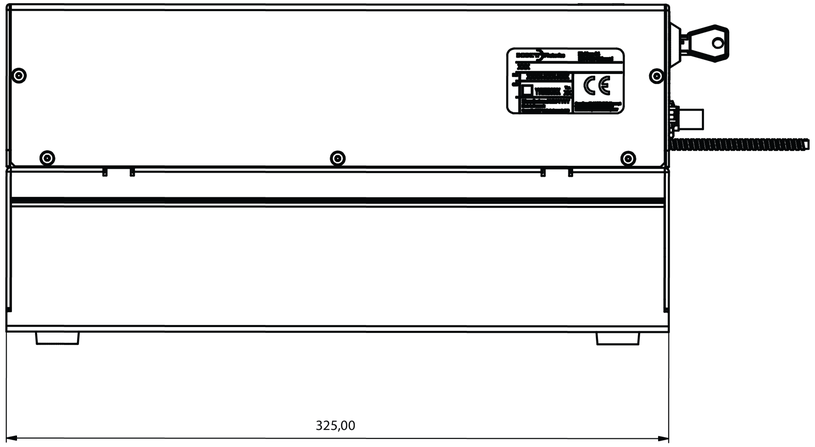
Software Development Kit (SDK)

The free software development kit (SDK) enables control of the SuperK EVO HP 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





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

FORCE Certification
Systemcertificering
DS/EN ISO 9001 - Kvalitet

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