NKT Photonics

A HAMAMATSU COMPANY

SuperK EVO

Industrial white light laser

High brightness over a wide spectral bandwidth

Ideal for optical device characterization and Test & Measurement.

The SuperK EVO is a range of cost-efficient white light lasers based on our extremely reliable fiber laser technology. Designed for maintenance-free operation, the lasers are extremely stable, boast a long lifetime, and grant a low cost of ownership.

SuperK
EVO

Applications

OCT

Thin film

General illumination

Test & Measurement

Inspection, sorting, and quality control

Replacement of Superluminescent Emitting Diodes (SLEDs, SLDs)

Characterizations of optical components and materials

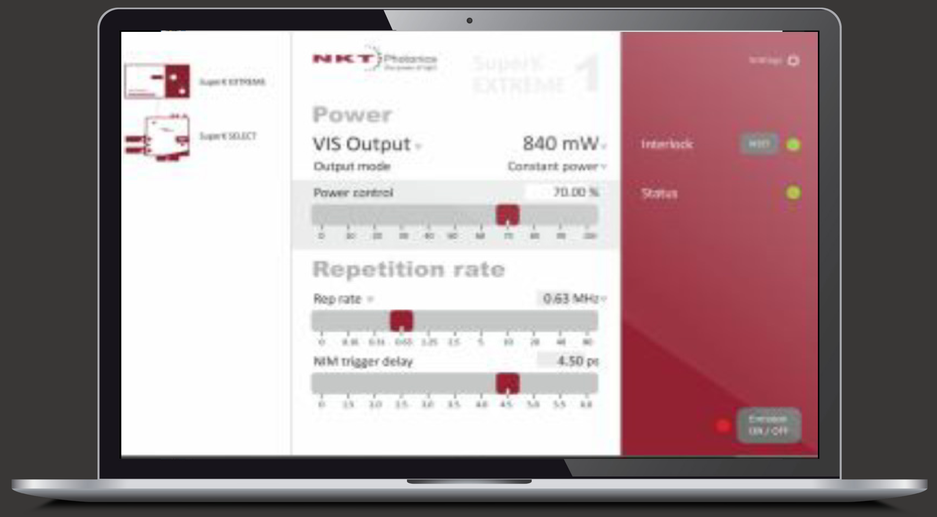
Ease of use

High brightness
The SuperK EVO has a very high brightness across the 425 - 2400 nm range.

High repetition rate
With a standard repetition rate of 20 or 30MHz, the EVO is perfectly suited for Test & Measurement and optical device characterization.

Graphical user interface and software development kit
The SuperK EVO is compatible with all existing SuperK filters and accessories.

Get an utmost user-friendly operation through our NKT Photonics CONTROL software or a direct interface through the free software development kit.



SuperK
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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

Versatile cost-efficient white light laser platform
High brightness
High repetition rate
Robust and compact industrial design
Free software development kit
Plug and Play with all SuperK accessories
Maintenance-free 24/7 operation
Simple and intuitive user interface via NKT Photonics CONTROL

Repetition rate (fixed)	20, 30 MHz
Trigger out signals	NIM
Trigger signal jitter	< 20 ps
Adjustable trigger delay [1]	Up to 9.2 ns
Adjustable trigger delay resolution	15 ps

[1] The electrical output trigger signal can be delayed up to 9.2 ns in steps of 15 ps.w

SuperK
EVO

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 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

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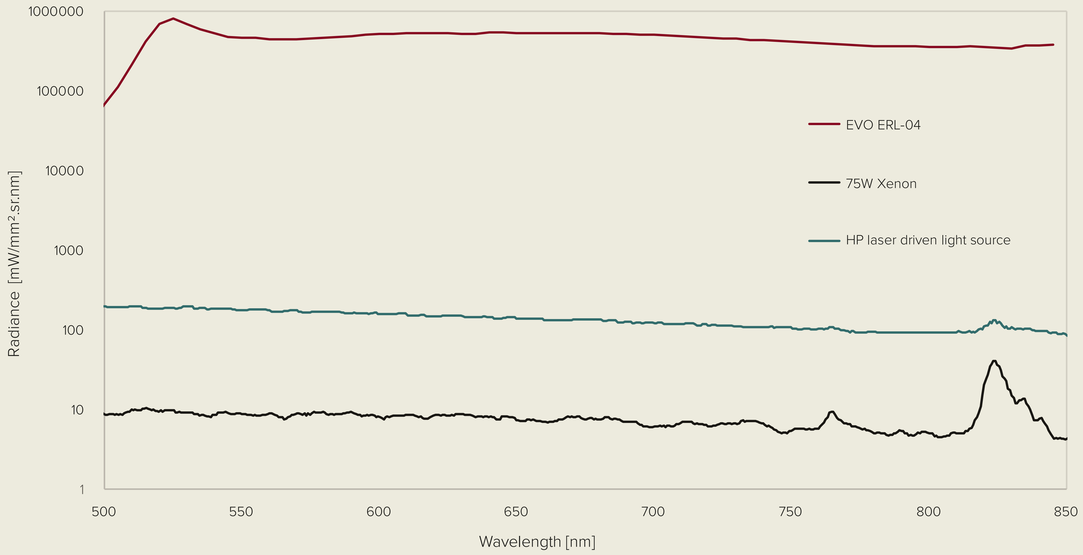
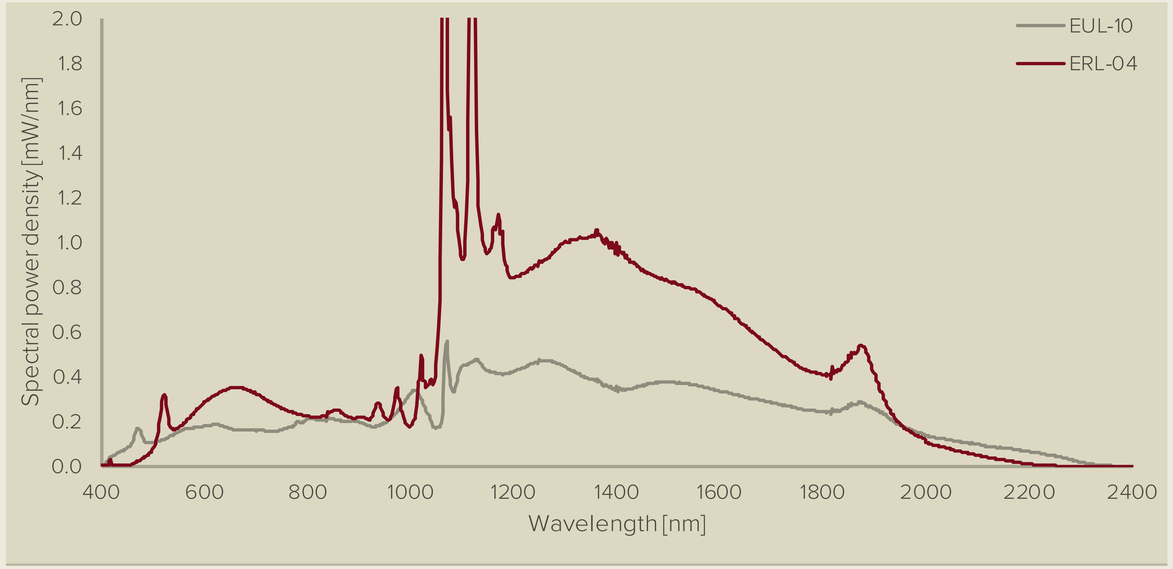
Spectral radiance



Spectral power density



Specifications

SuperK
EVO

Optical

Model	ERL - 04	EUL - 10
Repetition rate [MHz]	20	30
Spectral coverage [nm]	510 - 2000	425 - 2250
Spectral power density [mW/nm]	N.A.	0.08 @ 450 nm
	0.10 @ 532 nm	0.10 @ 532 nm
	0.20 @ 650 nm	0.16 @ 650 nm
	0.25 @ 780 nm	0.20 @ 780 nm
	0.25 @ 800 nm	0.20 @ 800 nm
Total power [W]	≈ 1	≈ 0.3
Visibe power (350-850 nm) [mW]	≈ 40	≈ 60
Total power stability, RMS [%]	± 1	± 1
Cut-in wavelength [nm] [1]	510	425
Polarization	Random	Random
Beam quality	Diffraction Limited	Diffraction limited

Beam diameter (collimated version) [mm]	≈ 1 @ 532 nm	≈ 1 @ 532 nm
	≈ 2 @ 1100 nm	≈ 2 @ 1100 nm
	≈ 3 @ 2000 nm	≈ 3 @ 2000 nm
Fiber output	Collimated	Collimated
Beam divergence [mrad]	< 1.5	
Laser Class	4	

[1] Spectral power density > 0.1 mW/nm

Specifications

Electrical/Mechanical

Model	ERL - 4	EUL - 10
Output fiber length [m]	1.5	1.5
Computer interface	USB 2.0/RS-232/Ethernet	USB 2.0/RS-232/Ethernet
Sync (trigger) output	NIM	NIM
Power supply requirements [V DC]	24	24
Power consumption [W] [1]	< 30	< 30
Door interlock connector [2]	2-pin LEMO	2-pin LEMO
External bus interface	15 D-Sub	15 D-Sub
Operation temperature [°C]	18 - 35	18 - 35
Storage temperature [°C]	-10 - 60	-10 - 60
System cooling [3]	Passive	Passive
Dimensions (WxHxL) [mm]	200 x 90 x 325	200 x 90 x 325
Weight [kg]	6	6

[1] Power consumption is depending on the total output power. [2] SuperK EVO is a class 4 laser and required to be connected to a door interlock/circuit.[3] Heat radiation from the base plate.

SuperK
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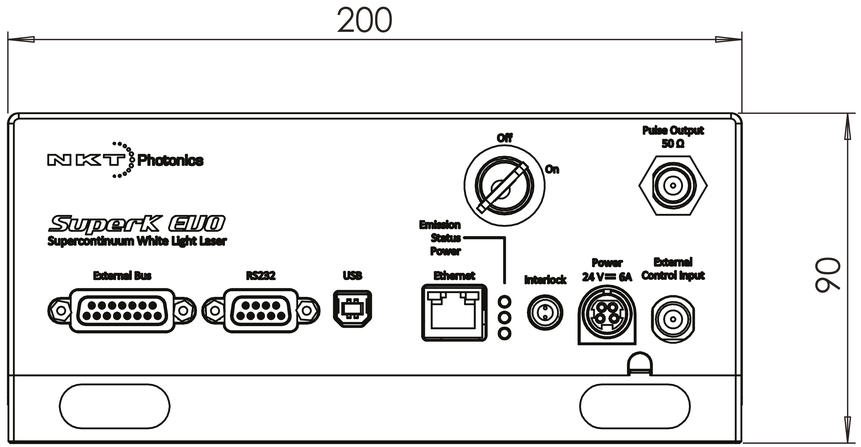
Software Development Kit (SDK)

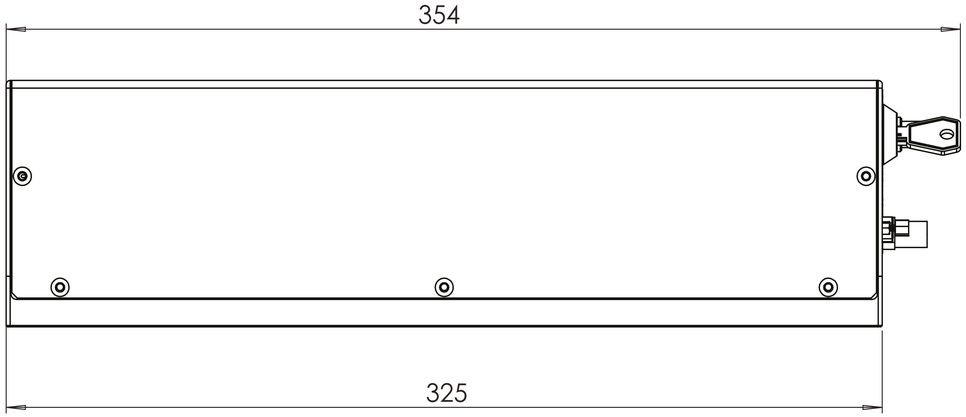
The free software development kit (SDK) enables control of the SuperK EVO laser using third party software and hardware.

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

Technical Drawings

SuperK
EVO





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

SOLUTIONS FOR INNOVATORS

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