

Horizon

Supercontinuum Fiber Laser with Ultra Flat Spectrum

The Horizon Supercontinuum Fiber Laser is a cutting-edge optical source designed to redefine performance in spectroscopy and imaging. With an ultra-flat spectrum, free of spurious spectral peaks, it spans an impressive spectral range of 450 and 2300 nm.

With its spatial coherence, broad spectral coverage and spectral flatness, Horizon outperforms traditional light sources.

Ideal for advanced scientific and industrial applications, including fluorescence lifetime imaging and beyond, where consistent, high-quality illumination is critical. Whether in research or industrial environments, Horizon empowers users with a robust, high-performance solution for their optical needs.

Spectral Range

450 - 2300 nm

Average Power

> 3 W

Visible Range (450-750 nm)

Average Power:

~ 250 mW

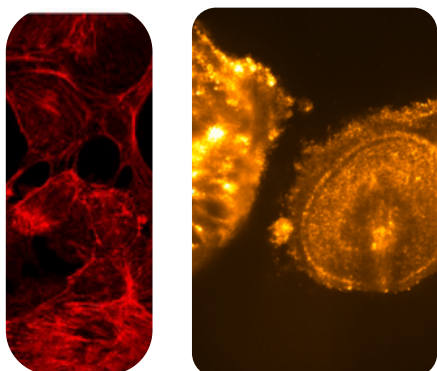
/ Highlights

Ultra Flat Spectrum

Outstanding Power Stability



/ Applications



Microscopy

Fluorescence-lifetime imaging microscopy (FLIM)

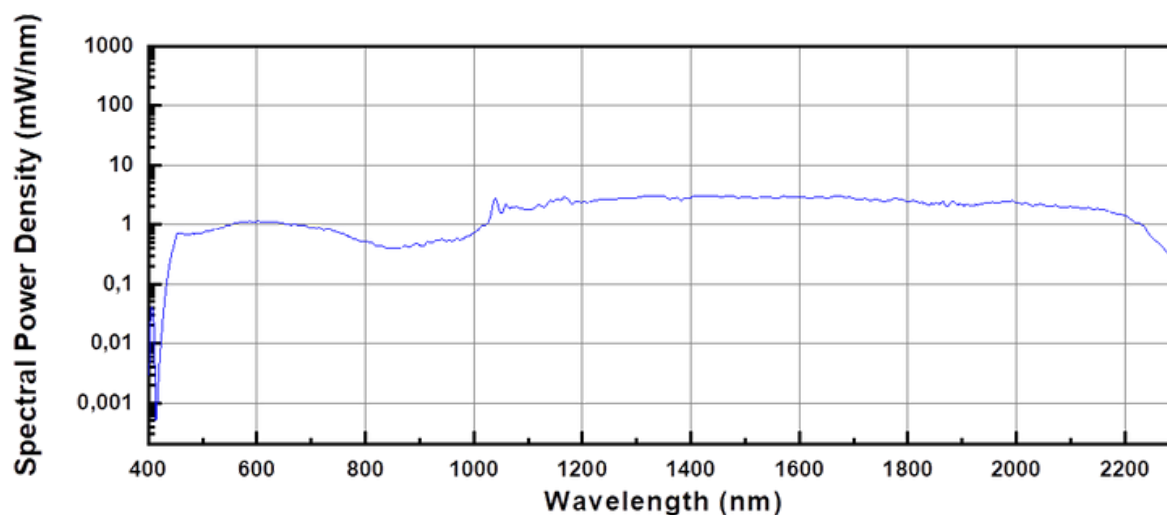
Time-correlated single-photon counting (TCSPC)

FRET imaging

Lifetime measurement

Horizon

/ Typical Optical Spectrum



/ Accessories

Tunable Visible Range

BOREAL is the accessory for supercontinuum lasers to choose any wavelength in the visible range.

The perfect white laser plug-in accessory for bioimaging, nanophotonic and more.



Spectral Range:

400* - 1000 nm

Optical Output:

Free space or Fibre output (1 m) (Collimated output customizable)

Bandwidth:

10 - 600 nm

Simultaneous selectable band:

1

Resolution:

1 nm

Insertion losses (full bandwidth):

≤ 10 % (free space output)

≤ 30 % (Multimode fibre output)

≤ 60 % (Single-mode fibre output)

* Initial wavelength depends on the supercontinuum source

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/ Technical Specifications

Spectral Range:

450 - 2300 nm

Average Power:

> 3 W

Visible Range (450-750 nm)

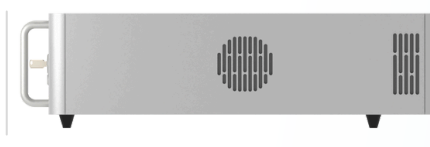
Average Power: ~ 250 mW

Pulse Repetition Rate:	80 MHz
Power Stability:	$\leq 0.5 \%$ (std. dev.)
Pulse Duration:	$< 10 \text{ ps @ } 1060 \text{ nm} \mid \leq 250 \text{ ps full spectrum}^*$
Polarization:	Unpolarized
Output Port:	Single Mode Fiber. 1 m length (customizable)
Optical Output:	Collimated (in the range 450 - 1000 nm) Single-mode across full spectrum
Synchronization / Connections:	TTL (SMA) ; NIM (SMA) Under request
Beam Diameter @ 1 m of distance:	@ 470 nm $\leq 2 \text{ mm}$ / @ 580 nm $\leq 2.5 \text{ mm}$ / @ 725 nm $\leq 3.5 \text{ mm}$ / @ 1150 nm $\leq 5.5 \text{ mm}$
Spatial Mode Quality (M^2):	< 1.2
Cooling:	Thermoelectric cooler + air cooling
Power Requirements:	110V - 220 V / 50 Hz-60 Hz
Operating Temperature:	20 - 30 °C
Storage Temperature:	0 - 60 °C
Dimensions:	436x560x151 (WxDxH)
Control:	Manual / Software via USB
Safety Connections:	Interlock / Key



436 mm

151 mm



560 mm

*Estimated value

OTHER DETAILED SPECS UNDER REQUEST

Rev. 02

Horizon

/ Additional information



Laser Safety:

This product is a Class 4 laser.

CAUTION – VISIBLE AND INVISIBLE LASER RADIATION!
AVOID EYE AND SKIN EXPOSURE TO DIRECT OR SCATTERED
RADIATION.

Appropriate safety measures according to such laser class
should be taken in its installation and use.

Warranty:

12 months warranty + 12 months of commercial warranty or > 10,000h of continuous operation.

Extended warranty on request.



/ FYLA contact

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