

Ultrafast lasers that simply work

FOR INDUSTRY, SCIENCE AND MEDICINE

# Oscillator Yb

Truly All-Fiber Femtosecond Oscillator



This femtosecond oscillator was specifically developed to be the rock-solid heart of all Fluence femtosecond lasers. Its design is based on Fluence truly-all- PM-fiber technology with no degradable components inside and no SESAM. It was tested while turned on and mode-locked under extreme temperatures (from  $-10^{\circ}$  to  $40^{\circ}\text{C}$ ) and vibrations up to 40 g. This exceptional feature together with small size and low power consumption make this oscillator a perfect solution for all OEM applications.

**Technical specification:**

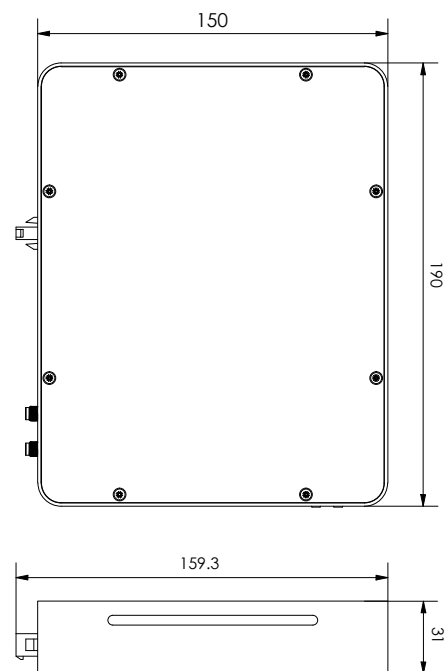
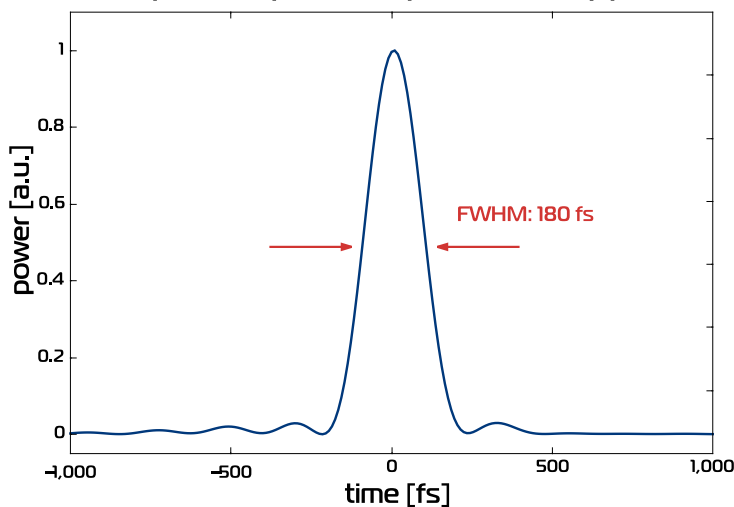
Maximum average power	>15 mW @ 1030nm
Maximum pulse energy	>0.75 nJ
Base repetition rate	20 MHz $\pm$ 2.5 MHz
Pulse duration	<200 fs FWHM (<180 fs typ.)
Fourier limit	>90%
Central wavelength	1030 $\pm$ 5 nm
Spectral bandwidth	>10 nm (FWHM)
Polarization	Linear
Output	Free -space
Output beam waist radius 1/e <sup>2</sup>	<0.9 mm
Beam quality M <sup>2</sup>	<1.2 (<1.1 typical)

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**Physical specification:**

Size	190 (L) x 150 (W) x 31 (H) mm <sup>3</sup>
Weight	1 kg
Electrical	External DC
Operating temperature	15-35 °C
Operating humidity	Non-condensing

**Compressed pulse temporal intensity profile**



All dimensions in mm

All specifications are subject to change without prior notice due to continuous improvements.