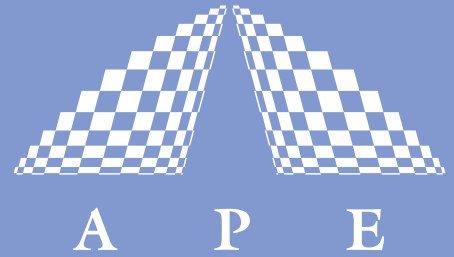


LEVANTE

EMERALD



Picosecond-OPO



The **Levante Emerald** is an optical parametric oscillator (OPO) synchronously pumped by a frequency doubled solid state laser. The **Levante Emerald** is pumped by a Nd:YVO laser at 532 nm and offers a Signal wavelength range from 690 to 990 nm and an Idler range from 1150 to 2300 nm.

With the **Levante Emerald** a stable system with broadband tunable ps pulses is available offering high average power in the NIR and excellent beam pointing stability. The generated pulses are bandwidth limited and of high beam quality. Tuning of the wavelength is easy and computer controlled.

A complete new beam quality is reached with the intrinsic perfect spatial and time overlap of the Signal and Idler beam, which are collinearly coupled out of the system.

The energy difference between Signal and Idler is continuously tunable, which makes it an ideal system for multi color excitation experiments, such as e.g. coherent Raman Scattering or CARS (Coherent Anti-Stokes Raman Scattering). Important wavelengths for MPE (Multiphoton Excitation Microscopy) are supplied directly from the system, such as e.g. 950 nm for GFP (green fluorescence protein) or 1160 nm for RFP (red fluorescence protein).

Two tuneable output beams with different colours (Signal and Idler)

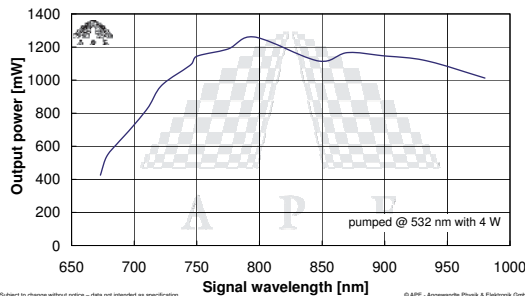
Jitterfree generation of different wavelengths

Integrated spectrometer for the Signal range

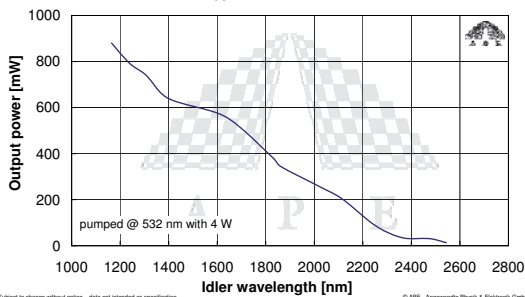
Automatic tuning via PC-Software

Signal and Idler beam separator included

Levante Emerald output power of Signal typical data



Levante Emerald output power Idler typical data



Signal and Idler Power Curves typ. @ 4 W pump

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acoustooptics

Your Partner in Ultrafast

SPECIFICATIONS

	Signal	Idler
Pump laser parameters	532 nm 4 W ca. 6 ps	
Tuning range	690 (typ. 680) ... 990 nm	1150 ... 2300 (typ. 2450) nm
Output power	> 0.75 W @ (750 ... 990 nm)	> 0.6 W @ (1150 ... 1350 nm)
Energy difference Signal - Idler	1400 ... 10000 cm ⁻¹	
Energy difference Signal - 1064 nm	700 ... 5000 cm ⁻¹	
Pulse width	~5 ... 6 ps	
Spectral bandwidth (Signal)	typ. 0.3 ... 0.4 nm	
Time bandwidth product	typ. 0.6	
Repetition rate	80 MHz (others on request)	
Beam quality M ²	< 1.2 (typ. 1.1)	
Polarization	Linear / horizontal	
Interface	RS232	

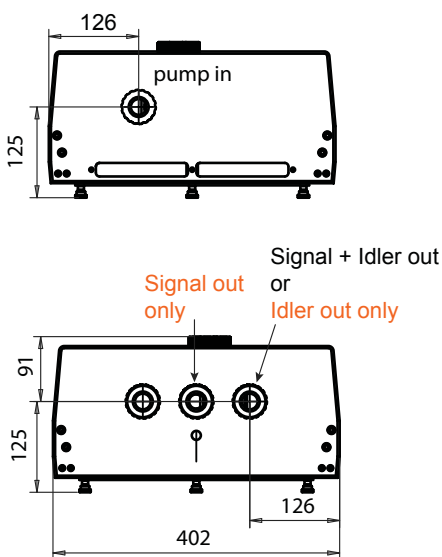
OPTIONS

- Autocorrelator
- Modulator for SRS and heterodyne CARS

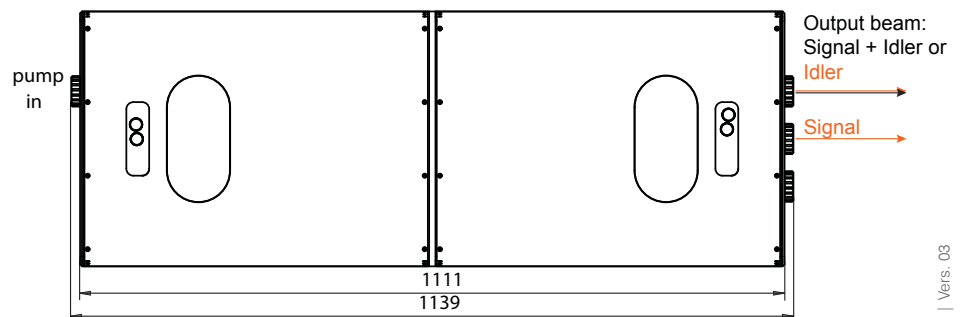
The **APE Levante Emerald** is delivered with an integrated spectrometer and removeable Signal/Idler beam separator.

DIMENSIONS (in mm)

Control electronics (W x H x D)	267 x 180 x 312
Optical unit:	



• optional beam separation by using included beam separator



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APE follows a policy of continued product improvement. Therefore, specifications are subject to change without notice.