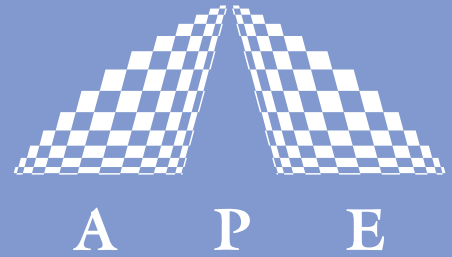


LEVANTE

EMERALD



Femtosecond Version



Using a frequency doubled Ytterbium-Laser (523 nm) as pump source this OPO provides the user with an attractive and economic solution for generating femtosecond pulses tuneable from 680 nm ... 2150 nm. Thereby the Levante Emerald substitutes the combination of femtosecond Ti:Sapphire laser and synchronously pumped OPO.

The output pulses are nearly transform limited. They show high beam quality and great pointing stability at the same time. The system covers a wide wavelength range in the NIR; it is easy to use and PC controllable.

Femtosecond pulses in the Ti:Sapphire wavelength range (OPO Signal) plus wavelengths above 1120nm (OPO Idler) provide all wavelengths desirable for MPE, SHG and THG microscopy. For instance GFP and RFP can be excited simultaneously with 950 nm and 1160 nm respectively.

The perfect pulse synchronization (jitter-free) of the pump laser fundamental (1045 nm) and the OPO Signal and Idler give the opportunity to use the system for CARS / SRS microscopy with continuously tunable energy differences from 650 to above 4000 cm^{-1} simultaneously with other nonlinear microscopy techniques.

Ideal for Multimodal Microscopy such as MPE, SHG, THG, CARS and SRS

Two-Colour Output

Perfect Pulse Synchronization

Automatic Wavelength Tuning via PC-Software

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acoustooptics

Your Partner in Ultrafast

TECHNICAL DATA

	Signal	Idler
Tuning ranges	690 (typ. 680) ... 980 nm	1120 ... 2150 nm
Output power	> 0.5 W (750 - 980 nm)	+ > 0.35 W (1150 - 1350 nm) @ 523 nm, 3 W, 300 fs pump
$\Delta\nu$ Signal-Idler	1270 ... 9850 cm^{-1}	
$\Delta\nu$ Signal - 1045 nm	635 ... 4925 cm^{-1}	
Pulse length (typical)	300 fs	
Spectral bandwidth (Signal/typical)	4 - 5 nm	
Time bandwidth product (typical)	0.6	
Pulse repetition rate	76 MHz (others on request)	
Interface	RS 232	
M^2	< 1.1 (typ. 1.05)	< 1.2 (typ. 1.1)
Polarization	horizontal (signal + idler)	

The APE Levante Emerald is delivered with an integrated spectrometer and removeable Signal/Idler beam separator. Available with HighQ femtoTrain pump laser (3 W @ 523 nm + 1 W @ 1045 nm).

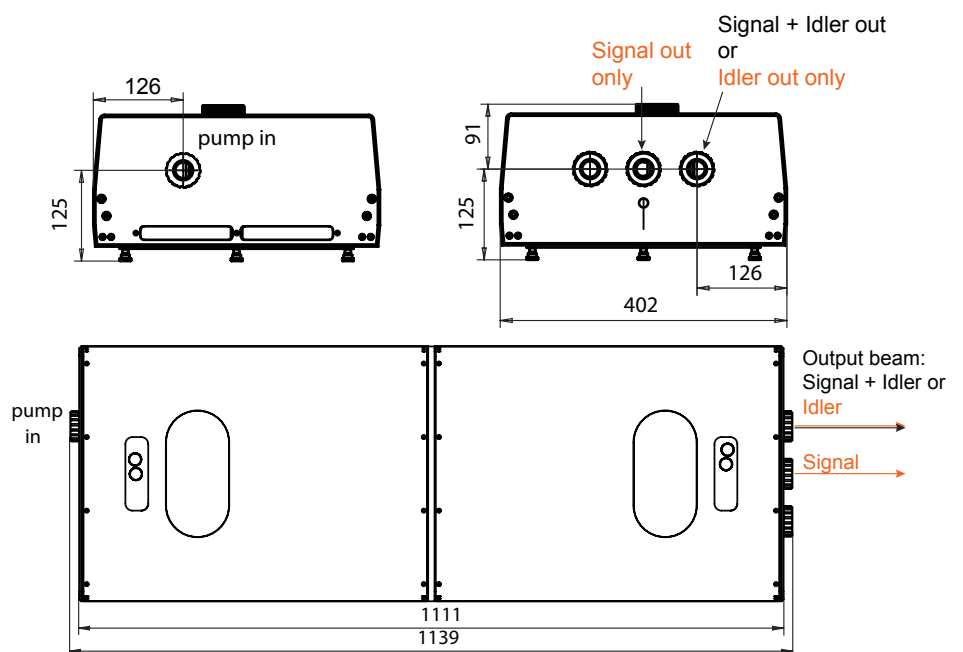
Also available as picosecond version to match the bandwidth of RAMAN lines for CARS and SRS microscopy.

DIMENSIONS (in mm)

Control Electronics (W*L*H*) 267 x 312 x 180

Optics Unit:

• optional beam separation by using included beam separator



Distributors
see APE website www.ape-berlin.com

APE GmbH Plauener Straße 163-165 Haus N / 13053 Berlin Germany
Phone +49.30.986.01130 Fax +49.30.986.011333 / Web www.ape-berlin.com Email ape@ape-berlin.de

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