

A P E

# HARMONI



GENERATOR

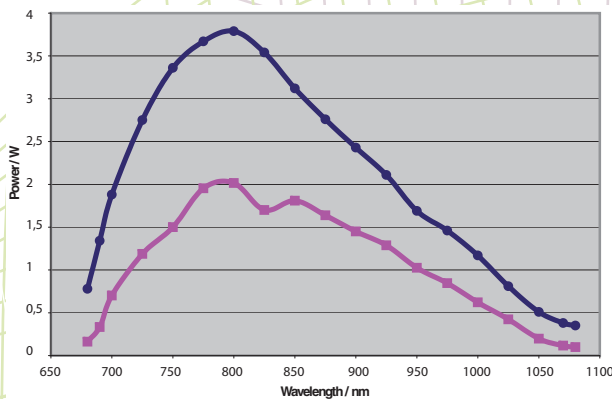
SHG / THG / FHG



APE GmbH now provides a new line of ultrafast doublers / triplers for modelocked lasers, Ti:Sapphire lasers in particular, but also for other wavelength ranges. It covers both femto- and picosecond pulses with easy convertibility.

The new ultrafast triplers are very compact and user friendly, and they are designed for highest conversion efficiency as well as minimum pulse broadening. They are based on a special delay compensator featuring a most easy adjustment. Due to single optical beam path a separation and recombination of the fundamental and SHG beams are no longer needed and the spatial overlap of the two beams is automatically obtained.

For coverage of shortest wavelengths there are 2 different FHG options available, the simple double-SHG (FHG 2+2) upgrade down to 210 nm and the SumFrequencyMixing-version (FHG 3+1) for wavelengths even below 200 nm.



Typical SHG output with high power femtosecond Ti:Sa oscillator (SHG only Version)

## Options:

By adding the **Autotracker** electronics the instrument corrects the phase matching angle to its optimum position automatically when the laser wavelength is tuned (available for SHG and THG).

Easy alignment

Adaptable to different pulse durations

Minimum pulse broadening

Excellent pointing stability

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acoustooptics

Your Partner in Ultrafast

## VERSIONS

- SHG only
- THG (includes SHG, optional FHG 2+2)
- FHG 3+1 (includes SHG, THG, Fhg 2+2)

## SPECIFICATIONS

Wavelength ranges: -

Input	680 ... 1080 nm
SHG	340 ... 540 nm
THG	227 ... 360 nm
FHG 2+2 option	210 ... 230 nm
FHG 3+1 version	190 ... 210 nm

Conversion efficiencies @ 1.3 W, 800 nm, 80 MHz, 130 fs / 1.6 ps:

SHG (SHG only version)	fs 40%	ps 15%
SHG (in THG version)	fs 20%	ps 10%
THG	fs 10%	ps 4%
FHG 2+2 option	fs 4% (@ 880 nm, 1,15 W)	
FHG 3+1 version	fs 1,5 mW	

## DIMENSIONS (in mm)

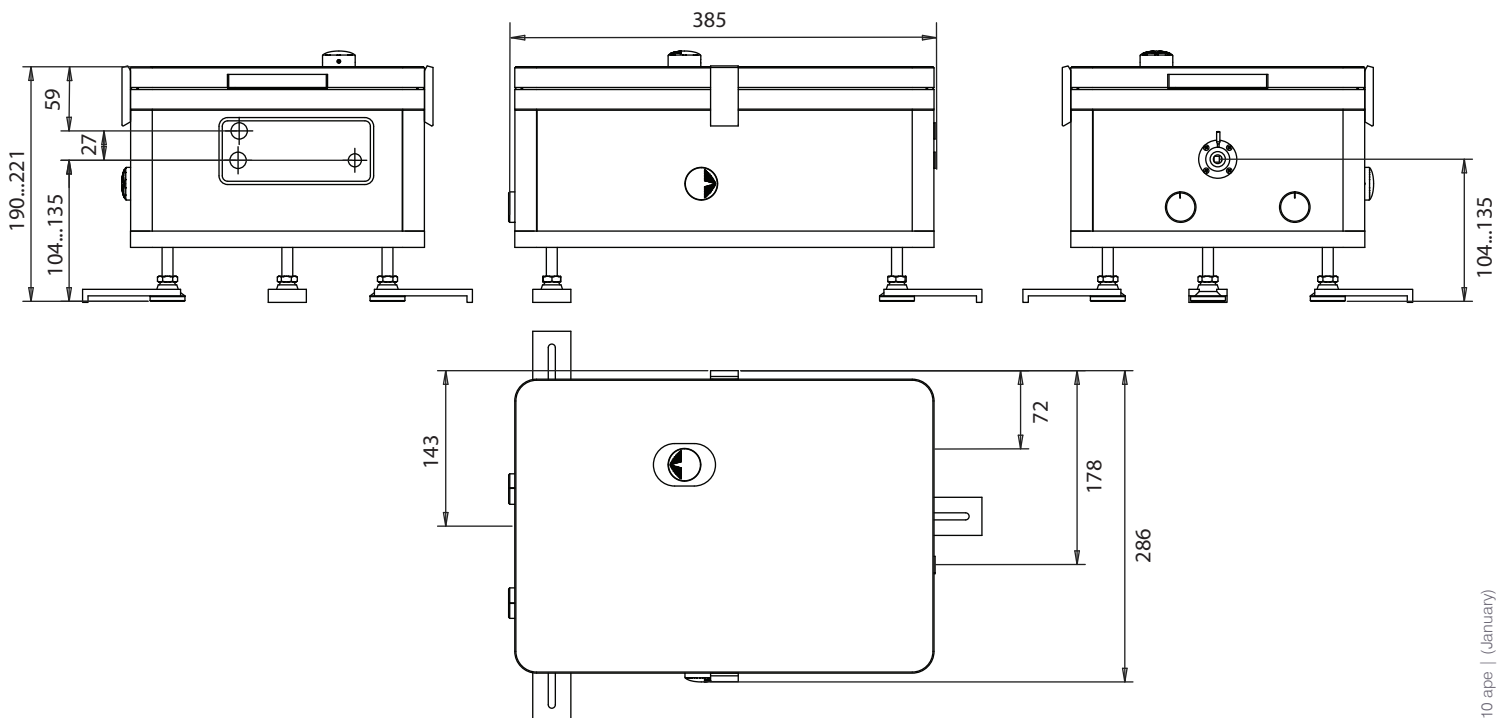
SHG only and THG versions:

385 x 286 x 221

FHG 3+1 version:

580 x 410 x 221

Drawings show (THG version):



Distributors

see APE website [www.ape-berlin.com](http://www.ape-berlin.com)

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