

Generation of Ultrashort Pulses

introducing
GWU UHG Series

NEW!

Ultrafast Harmonic Generator
for Femtosecond
and Picosecond Oscillators



GWU-Lasertechnik



UHG Series

Specifications

- high conversion efficiency for maximum **harmonic power**

Femtosecond	2 ω (SHG)	3 ω (THG)	4 ω (FHG)
Wavelength [nm]	340 – 540 ⁽¹⁾	226 – 360 ⁽¹⁾	209 – 242 ⁽²⁾
Conversion Efficiency	40%	10%	4%

Picosecond	2 ω (SHG)	3 ω (THG)	4 ω (FHG)
Wavelength [nm]	340 – 540 ⁽¹⁾	226 – 360 ⁽¹⁾	209 – 242 ⁽²⁾
Conversion Efficiency	20%	10%	on demand

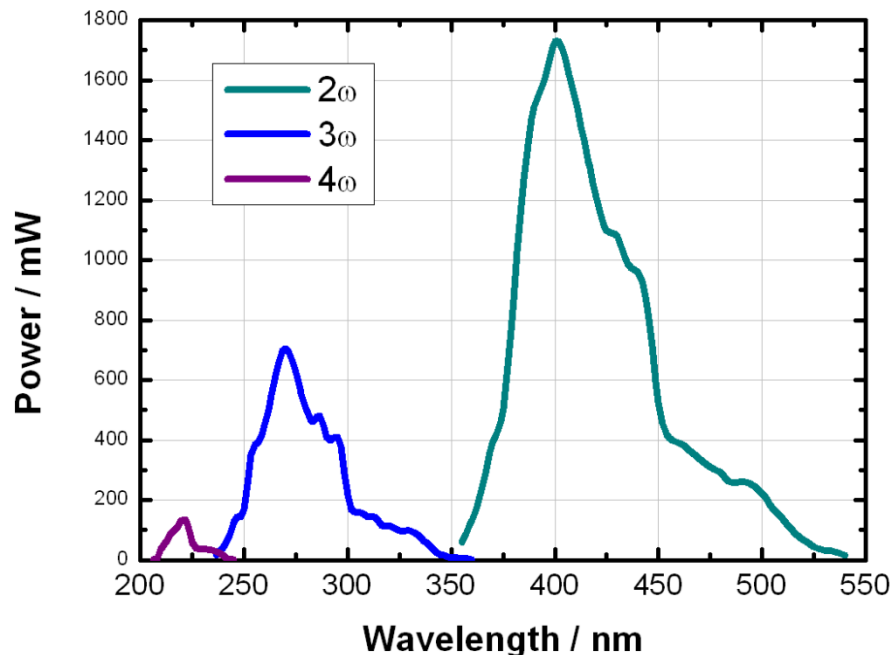
⁽¹⁾ Input wavelength 680 nm – 1080 nm

⁽²⁾ Input wavelength 836 nm – 986 nm

UHG Series

Tuning characteristics

- ultrafast from the visible to the deep-UV



Input: 680 – 1080 nm

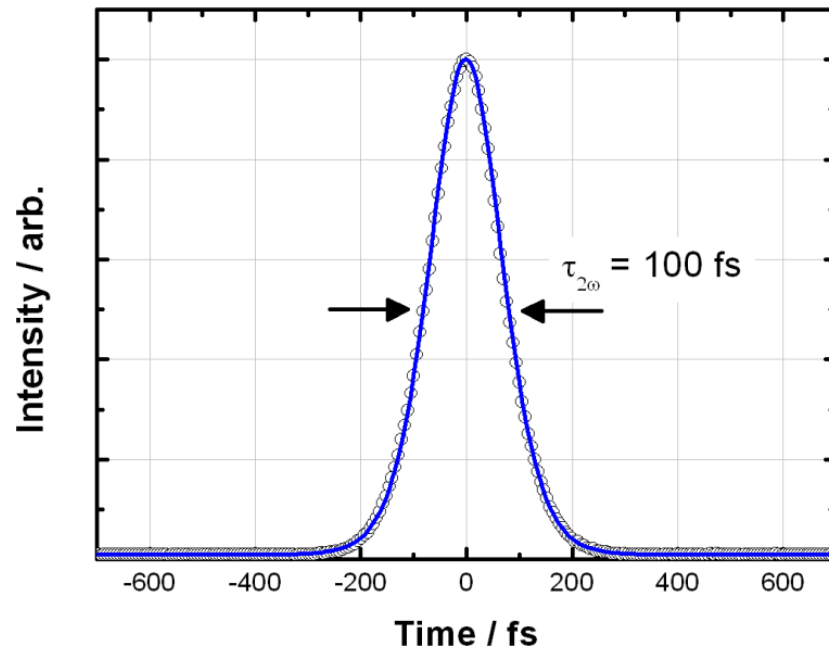
- 2 ω (SHG):
340 – 540 nm
- 3 ω (THG)
226 – 360 nm
- 4 ω (FHG)
209 – 242 nm

Typical tuning curves for femto operation with Spectra Physics
Tsunami XP lasers

UHG Series

Ultrashort pulses

- femto and pico operation

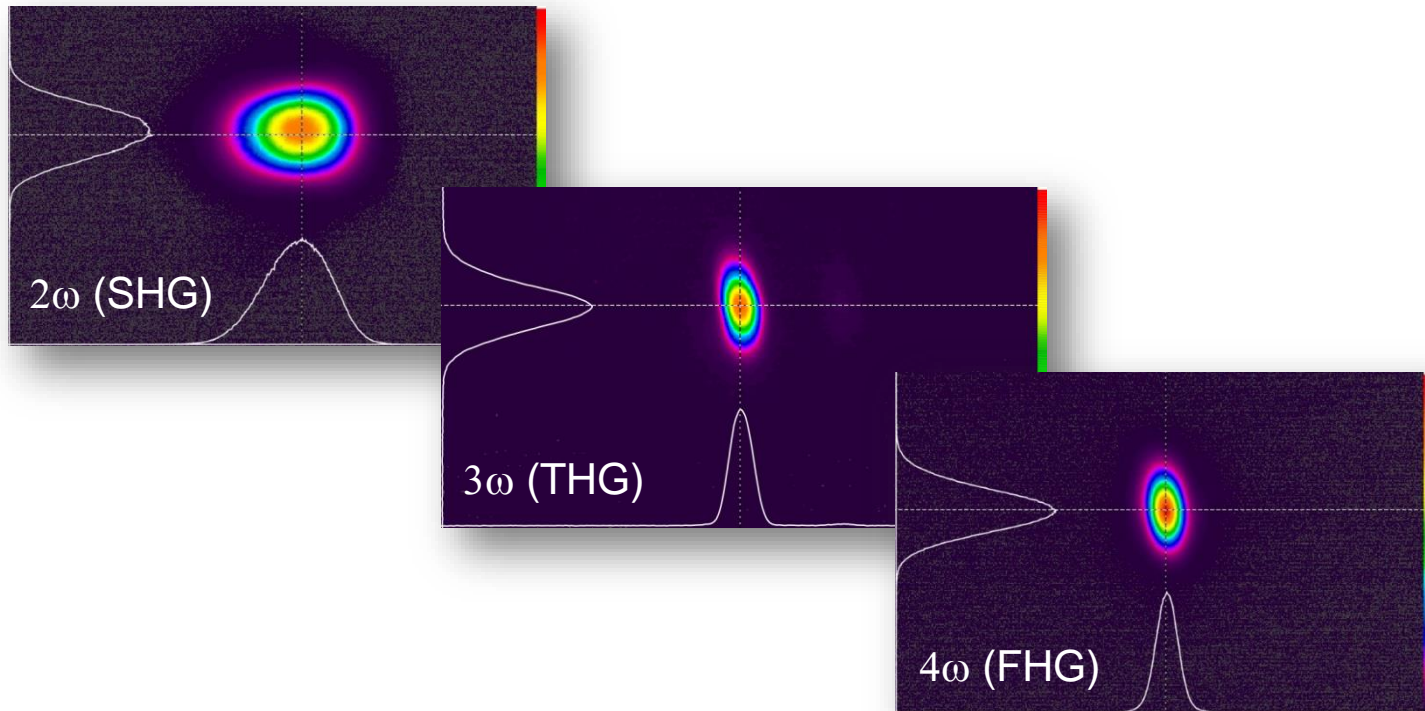


Typical autocorrelation trace for femto operation, pump 80 fs

- minimum pulse broadening
- easy conversion between femto and pico operation

UHG Series

Excellent beam parameters

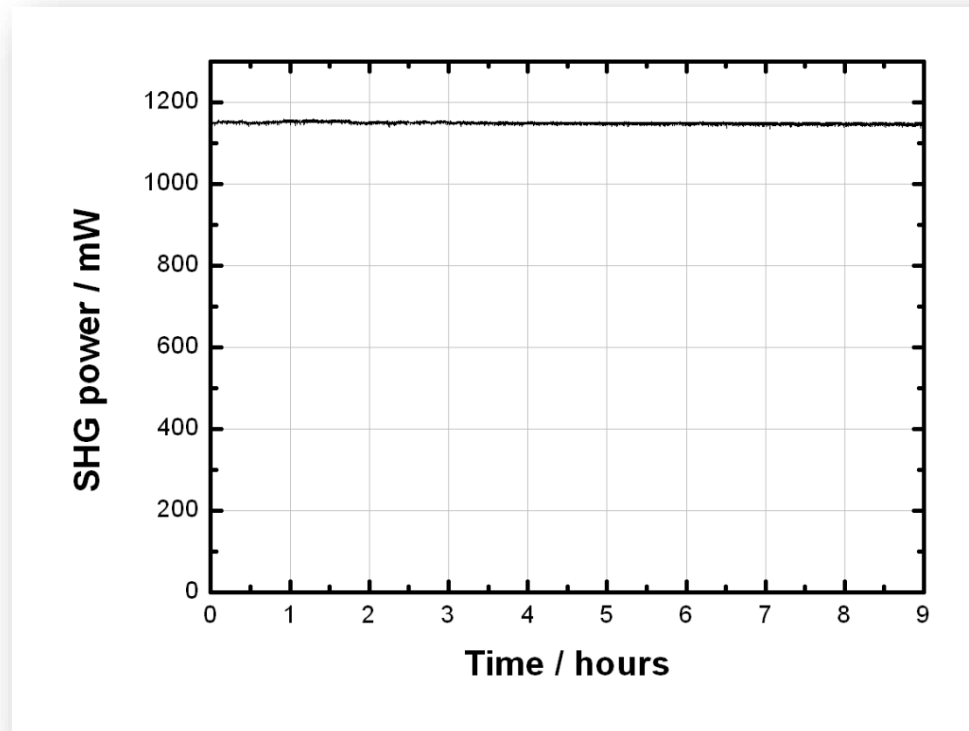


Typical beam profiles for femto operation

UHG Series

Reliable operation

- excellent long term stability



Typical power stability with Spectra Physics Mai Tai HP