

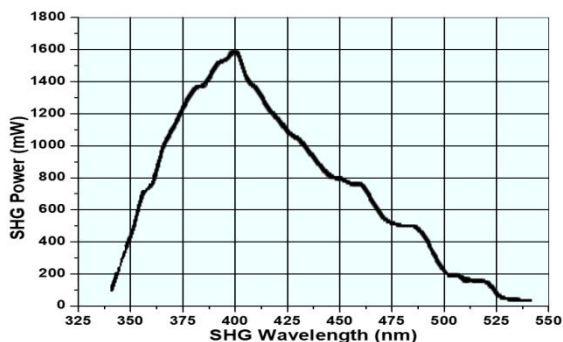
Laser Frequency Conversion Devices

Fourth Harmonic Generation (FHG)

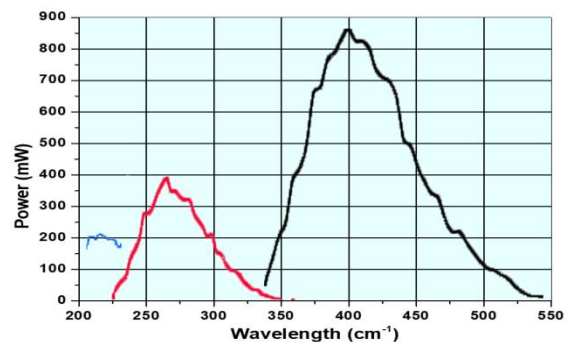
As part of our HarmoniXX series products, HarmoniXX FHG is a frequency conversion device that can increase the frequency of ultrashort pulse laser to 2 times, and its frequency is 4 times the frequency of the incident laser beam.

Parameters	HarmoniXX FHG 2+2
Input wavelength range	840 ... 920 nm (Other wavelengths available upon request)
FHG output	Low to 210 nm (e.g. 210 ... 230 nm for Ti:Sapphire)
SHG output	allowed
Fundamental frequency optical output	allowed
Pulse width	fs or ps
Conversion efficiency	FHG > 4 % (fs)* *depend on laser model/pulse width
walk-off compensation	Built-in mechanical walk-off compensation
State of polarization (linear)	Input: horizontal, FHG output: horizontal, SHG output: vertical, fundamental light output: horizontal
Automation	Fully electric, including GUI/software, automatic power adjustment optional
Optional configuration	
Automatic power adjustment	Press the button to automatically optimize the output power
Quick replacement of optical kit	wavelength range replacement components; Pulse width replacement unit fs – ps

Parameters	HarmoniXX FHG 3+1
Input wavelength range	760 ... 920 nm (Other wavelengths available upon request)
FHG output	Low to 190 nm (e.g. 190 ... 210 nm for Ti:Sapphire)
SHG, THG output	allowed
Fundamental frequency optical output	allowed
conversion efficiency	FHG < 0.1 % (fs)* *depend on laser model/pulse width
State of polarization (linear)	Input: horizontal, FHG output: vertical, THG output: horizontal, SHG output: vertical, fundamental frequency light output: vertical
automation	Do not include; Available on request



Typical SHG power tuning curve, which is pumped by Ti: Sapphire laser at about 3.5 W, 80 MHz and 130 fs.



THG in HarmoniXX, SHG in THG, FHG 2+2 tuning curve, pumping laser Ti: Sapphire, 3.5 W, 80 MHz, 130 fs