

HIRO

Harmonics Generator

FEATURES

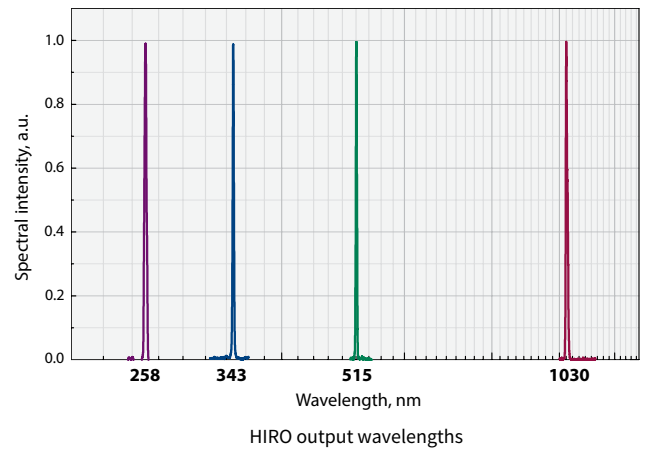
- 515 nm, 343 nm, 257 nm
- Easy switching between active harmonic
- Simultaneous outputs available
- Integrated separation of the harmonics
- Flexible in fixing and easily customized to include additional options (continuum generators, beam expanders down-collimators)



HIRO is a valuable option for PHAROS/CARBIDE lasers and FLINT oscillators that provides high power harmonics radiation at 515 nm, 343 nm and 258 nm wavelengths. We offer several standard HIRO models (with open prospect of future upgrades) which meet most users' needs. The active harmonic is selected by manual rotation of the knob – changing the harmonics will never take longer than a few seconds thanks to its unique layout and housing construction.

HIRO is the most customizable and upgradable harmonics generator available on the market. It can be easily modified to provide white light continuum, beam splitting/expanding/down-collimating options integrated in the same housing, as well as harmonics splitting, that makes all three harmonics available at a time.

Please contact LIGHT CONVERSION for customized version of HIRO.



SPECIFICATIONS

| Model | PH1F1 | PH1F2 | PH1F3 | PH1F4 | PH_W1 | Output polarization |
|---|-------------|----------------------------|----------------------------|---|---|----------------------|
| Available outputs ¹⁾ | 2H (515 nm) | 2H (515 nm) 4H (258 nm) | 2H (515 nm) 3H (343 nm) | 2H (515 nm) 3H (343 nm) 4H (258 nm) | any combination and white light continuum | |
| Conversion efficiency of 2H ²⁾ | > 50 % | | > 50 % ³⁾ | | | H (V ⁴⁾) |
| Conversion efficiency of 3H ²⁾ | n/a | | > 25 % | | | V (H ⁴⁾) |
| Conversion efficiency of 4H ²⁾ | > 10 % | | > 10 % ^{3) 5)} | | | V (H ⁴⁾) |

PHYSICAL DIMENSIONS

| | |
|----------------------------------|-------------------------------|
| General dimension of the housing | 455 (L) × 160 (W) × 85 (H) mm |
| Recommended area for fixing | 425 (L) × 255 (W) mm |
| Beam steering/intercepting | 150 (L) × 55 (W) × 75 (H) mm |

¹⁾ Depends on pump laser model.

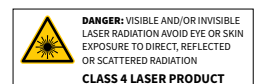
²⁾ Harmonics conversion efficiencies are given as percentage of the input pump power/energy when the repetition rate is up to 200 kHz.

³⁾ When the third harmonic is not in use.

⁴⁾ Optional, depending on request.

⁵⁾ Max. 1 W.

Residual fundamental radiation available upon request.
HIRO pumped with ps pulses available on request.



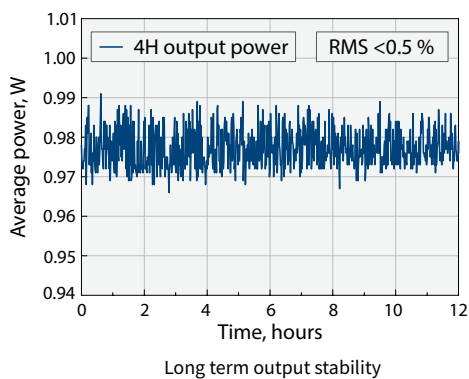
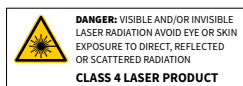
HARMONICS GENERATION FOR FLINT

FLINT oscillator can be equipped with optional wavelength converter HIRO providing harmonics radiation at 517 nm, 345 nm and 258 nm wavelengths.

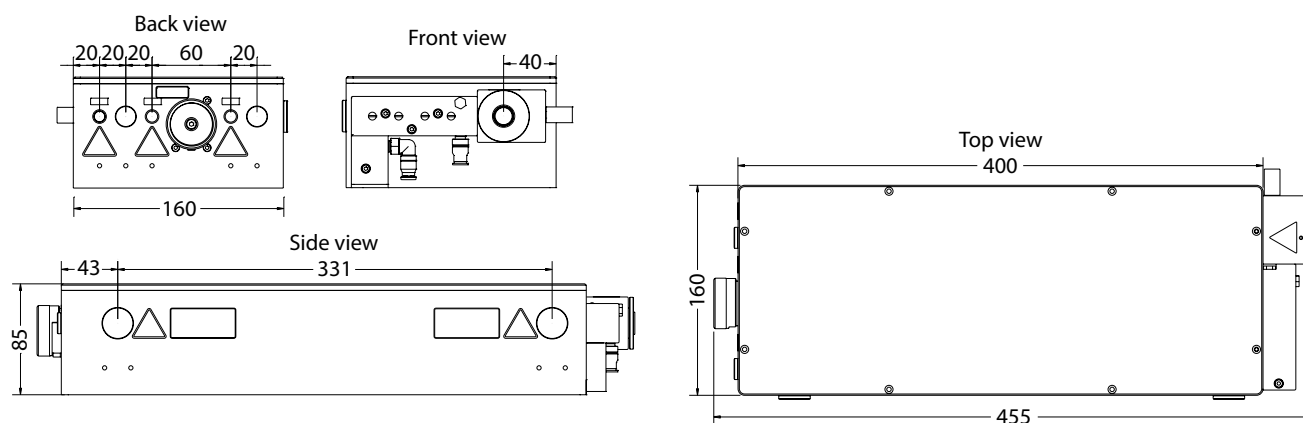
| Generated harmonics | 2H | 3H | 4H |
|-----------------------|--------|--------|--------|
| Output wavelength | 517 nm | 345 nm | 258 nm |
| Conversion efficiency | >35 % | >5 % | >1 % |

PHYSICAL DIMENSIONS

| | |
|----------------------------------|-------------------------------|
| General dimension of the housing | 455 (L) × 160 (W) × 85 (H) mm |
| Recommended area for fixing | 425 (L) × 255 (W) mm |
| Beam steering/intercepting | 150 (L) × 55 (W) × 75 (H) mm |



OUTLINE DRAWINGS



HIRO housing with water cooling system dimensions and positions of input/output ports (mm)



HIRO, PHAROS and ORPHEUS-HP in the lab