

# HIRO

## Customizable Harmonic Generator

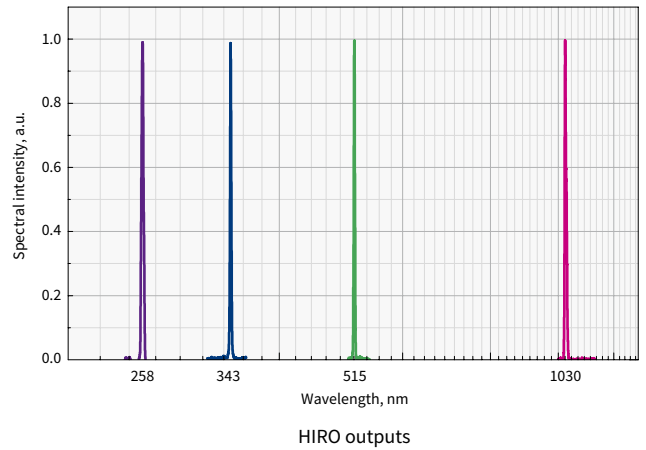
### FEATURES

- 1030 nm, 515 nm, 343 nm, and 257 nm outputs
- Simple selection of active harmonic
- Simultaneous or switchable outputs
- Customizable for additional options



HIRO is a customizable free-standing harmonic generator for PHAROS and CARBIDE lasers, and FLINT oscillators. It provides a high power harmonic radiation at 515, 343, and 258 nm wavelengths. The selection of an active harmonic is manual but requires less than a few seconds thanks to unique optomechanical design.

HIRO can be customized for additional options such as beam size and collimation adjustment, white light continuum generation, as well as beam division and harmonics splitting, which makes all harmonics available at the same time.



### SPECIFICATIONS (for PHAROS and CARBIDE lasers)

Model	PH1F1	PH1F2	PH1F3	PH1F4	PH_W1
Available outputs <sup>1) 2)</sup>	515 nm (2H)	515 nm (2H) 258 nm (4H)	515 nm (2H) 343 nm (3H)	515 nm (2H) 343 nm (3H) 258 nm (4H)	any combination and white light continuum
Maximum pump power <sup>3)</sup>	20 W				
Pump pulse energy <sup>3)</sup>	8 – 1000 μJ				
Conversion efficiency <sup>4)</sup>	> 50% (2H) > 10% (4H) <sup>6)</sup>		> 50% (2H) <sup>5)</sup> > 25% (3H) > 10% (4H) <sup>5) 6)</sup>		
Polarization <sup>7)</sup>	Linear, horizontal (2H) Linear, vertical (3H, 4H)				

### PHYSICAL DIMENSIONS

Housing (L × W × H)	455 × 160 × 85 mm
Recommended area for fixing (L × W)	425 × 255 mm
Beam steering/intercepting (L × W × H)	150 × 55 × 75 mm

<sup>1)</sup> Depends on pump laser model.

<sup>2)</sup> Residual fundamental radiation available on request.

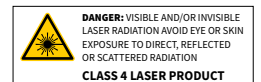
<sup>3)</sup> Models for up to 80 W and 3 mJ are available upon request, contact sales@lightcon.com.

<sup>4)</sup> Percentage of pump power; for repetition rate of up to 200 kHz.

<sup>5)</sup> When the third harmonic is not in use.

<sup>6)</sup> Maximum output power of 1 W.

<sup>7)</sup> Different polarization is available on request.



## SPECIFICATIONS (for FLINT oscillators)

Generated harmonics	2H	3H	4H
Output wavelength <sup>1)</sup>	515 nm	343 nm	258 nm
Maximum pump power <sup>2)</sup>	4 W		
Conversion efficiency <sup>3)</sup>	> 35%	> 5%	> 1%

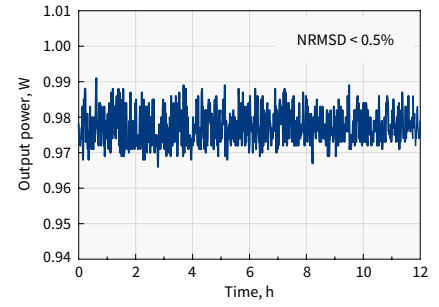
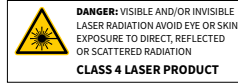
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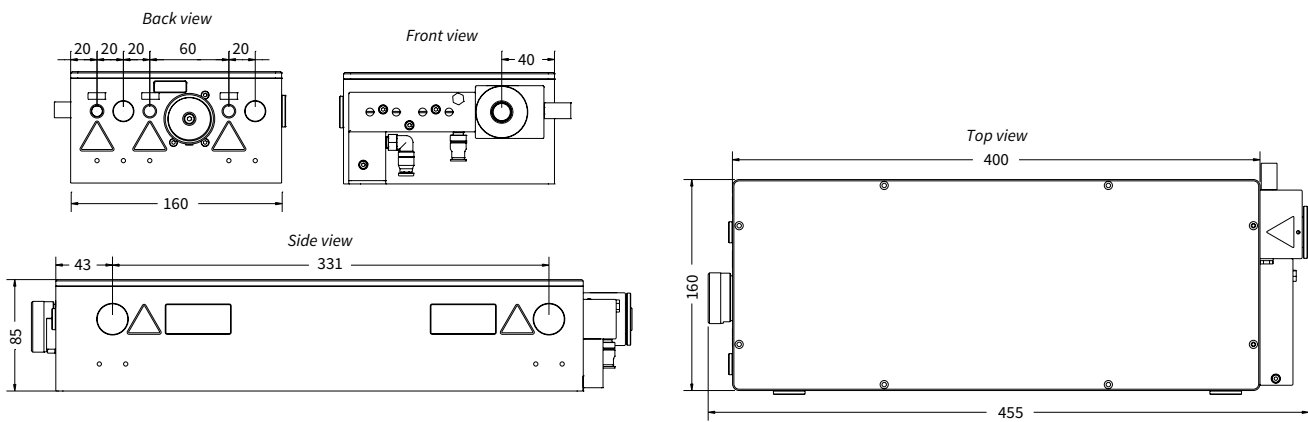
<sup>2)</sup> For high power 2H, refer to HG for FLINT.

<sup>3)</sup> For pump power of > 500 mW.



4H output power stability

## DRAWINGS



Drawings of HIRO with water-cooling