

## Automated Harmonic Generators



PHAROS with harmonic generator

515 nm, 343 nm, 257 nm,  
or 206 nm output

Automated harmonic selection

Industrial-grade design

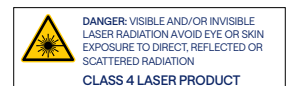
### Specifications

| Model  | 2H (-HE)                | 2H-3H (-HE)                 | 2H-4H (-HE)                            | 4H-5H   |
|--|-------------------------|-----------------------------|--|---|
| Output wavelength <sup>1)</sup><br>(automated selection) | 1030 nm<br>515 nm       | 1030 nm<br>515 nm<br>343 nm | 1030 nm<br>515 nm<br>257 nm            | 1030 nm<br>257 nm<br>206 nm                         |
| Pump pulse energy  | 20 – 4000 $\mu$ J       | 50 – 4000 $\mu$ J           | 20 – 4000 $\mu$ J                      | 200 – 1000 $\mu$ J                                  |
| Pump pulse duration                                      | 100 – 500 fs            |                             |  |   |
| Conversion efficiency                                    | > 50% (2H)              | > 50% (2H)<br>> 25% (3H)    | > 50% (2H)<br>> 10% (4H) <sup>2)</sup> | > 10% (4H) <sup>2)</sup><br>> 5% (5H) <sup>3)</sup> |
| Beam quality (M <sup>2</sup> )<br>typical values         | $\leq$ 400 $\mu$ J pump | < 1.15 (2H)                 | < 1.15 (2H)<br>< 1.2 (3H)              | n/a   |
|  | > 400 $\mu$ J pump      | < 1.2 (2H)                  | < 1.2 (2H)<br>< 1.3 (3H)               |   |

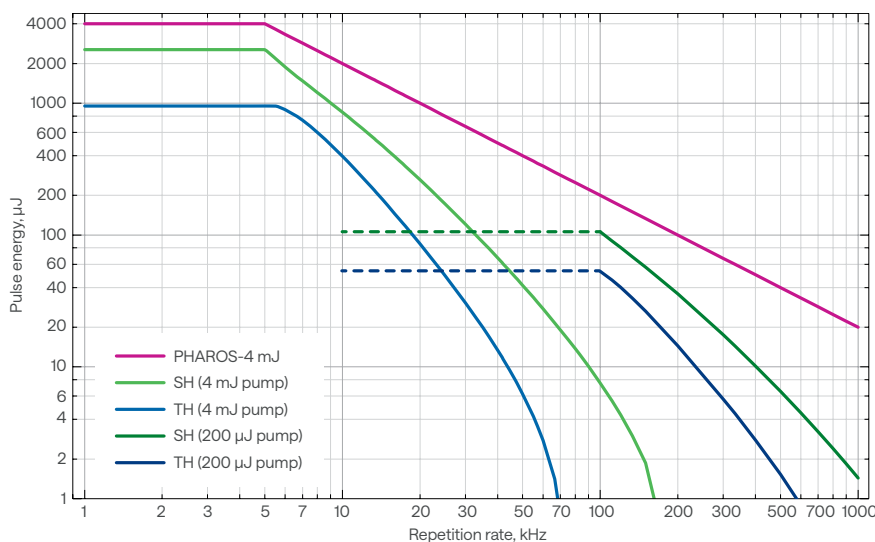
<sup>1)</sup> Depends on pump laser model.

<sup>2)</sup> Maximum output power of 150 mW.

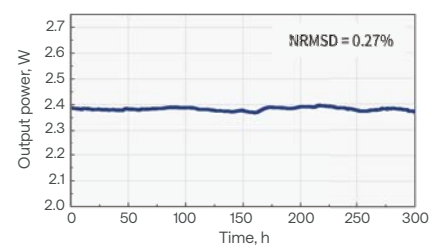
<sup>3)</sup> Maximum output power of 2 W at 20 – 1000  $\mu$ J pump or 1 W at 1000 – 4000  $\mu$ J pump.



### PHAROS with HG pulse energy vs repetition rate



### 3H output power stability



### 4H output power stability

