

# Phidia-c

## Compact Ti: Sapphire Ultrafast Laser Amplifier



### FEATURES

- Most compact single-box amplifier in the world
- Temperature controlled enclosure
- Industrial grade PM fiber seeders for <120 fs output
- External Ti:sapphire seeder for <40 fs output
- Field-proven pump laser modules
- Excellent reliability, stability and low maintenance
- Superior beam quality and pointing for more precise measurements
- Built-in burst mode
- Optional 2nd and 3rd harmonics generation

### APPLICATIONS

- Ultrafast industrial application
- Precision micromachining
- Material processing
- Pump-probe analysis
- Pump OPA
- THz generation

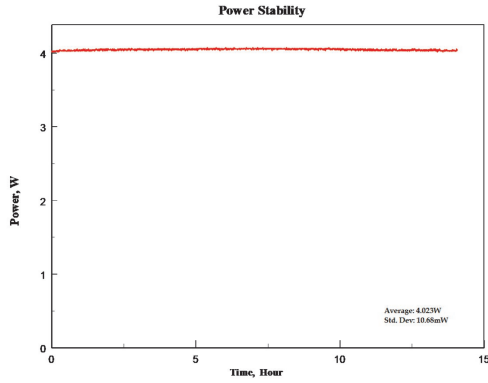
Phidia-c is the most compact one-box Ti: Sapphire ultrafast amplifier on the market. In a single enclosure, the Phidia-c contains an all-PM fiber oscillator, a pump laser and amplifiers. It features an industrial-grade, maintenance-free PM-fiber oscillator as a seeder, temperature controlled enclosure as well as a field-proven Q-switch pump laser resulting in a product with excellent reliability for day-to-day operations.

External Ti:sapphire oscillator (Aria-Ti) seeded Phidia-c-E is capable of delivering < 40 fs with output energy >5 mJ at 1 kHz

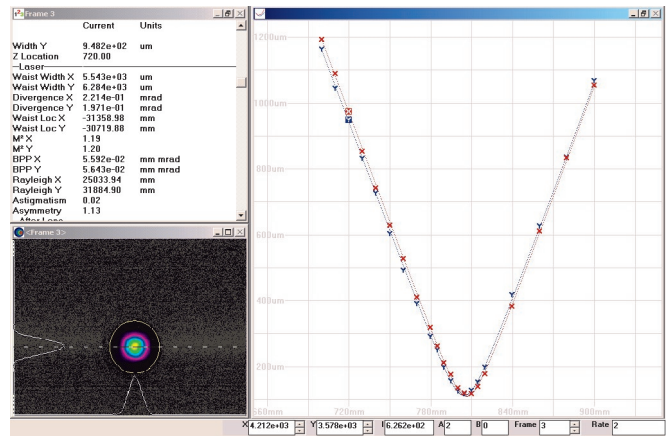
- Phidia-c-1 offers up to 4.0 mJ, <120 fs output, capable of operating up to 3 kHz repetition rate
- Phidia-c-10 delivers up to 1.5 W output at 10 kHz operating repetition rate.
- Phidia-c-E is capable of delivering <40 fs with output > 5 mJ at 1 kHz

The Phidia-c series are ideal ultrafast tools for industrial applications and scientific research, such as material processing, micro machining, ultrafast spectroscopy, etc.

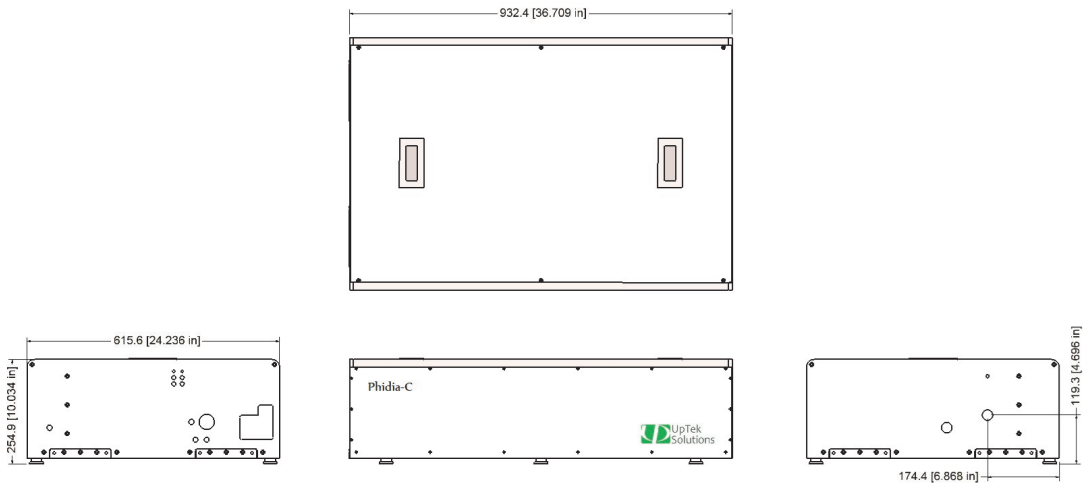
	Phidia-c-1	Phidia-c-10	Phidia-c-E
Pulse Width (FWHM)	< 120 fs	<120 fs	<40 fs
Seeder	Aria-F (PM fiber laser)	Aria-F (PM fiber laser)	Aria-Ti (external)
Output Power at 1 kHz	>4.0 W	>1.5 W	> 5.0 W
Repetition Rate	Up to 3 kHz	Up to 10 kHz	Up to 2 kHz
Center Wavelength	790 ± 10 nm	790 ± 10 nm	800 ± 5 nm
Spatial Mode	M <sup>2</sup> <1.3 (TEM <sub>00</sub> )	M <sup>2</sup> <1.3 (TEM <sub>00</sub> )	M <sup>2</sup> <1.3 (TEM <sub>00</sub> )
Power Stability	<0.5% RMS	<0.75% RMS	<0.5% RMS
Contrast Ratio	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >100:1 post pulse
Beam Pointing Stability	<10 μrad/°C	<20 μrad/°C	<10 μrad/°C
Beam Size (1/e <sup>2</sup> )	~7 mm	~5 mm	~ 8-10 mm
Polarization	Linear, Vertical	Linear, Vertical	Linear, Horizontal



Phidia-c-1 Stability Measurement (<0.3% RMS)



Phidia-c-1 Output Beam Quality Measurement



Phidia-c Laser Head Footprint