

COMPexPro Series

Small Footprint High Pulse Energy Excimer Lasers

The Precision Thin-film Engineering Laser

COMPexPro lasers are highly effective light sources, featuring a compact design and easy installation and operation. They deliver superior results in demanding applications, such as solid sampling systems (LA-ICPMS), material research (PLD) and precise material processing.

Featuring new ceramic preionization, the COMPexPro provides multi-hundred millijoules output, plus unmatched pulse-to-pulse stability. The COMPexPro also comes with an improved gas processor that extends both gas and optics lifetimes.



Superior Reliability & Performance

COMPexPro Features:

- **High pulse energy**
- **Preset stabilized energy operation**
- **Integrated, purgeable energy monitor**
- **Increased static gas lifetime**

COMPexPro Options:

- **Unstable Resonator**
- **Tube Temperature Stabilization**

COMPexPro Applications:

- **PLD – Pulsed Laser Deposition**
- **Thin Wafer Processing**
- **LA-ICPMS**

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| System Specifications ¹ | | COMPexPro 50 | COMPexPro 102 | COMPexPro 110 | COMPexPro 201 | COMPexPro 205 | | |
|--|--------------------------|--|--------------------------|--------------------------|--|--------------------------|--|--|
| Wavelength (nm) | | | | | | | | |
| Pulse Energy ¹ (mJ) | 193 248 308 351 | 100 150 — — | 200 400 250 200 | 200 400 250 200 | 400 700 500 300 | 400 700 500 300 | | |
| Max. Rep. Rate (Hz) | | 50 | 20 | 100 | 10 | 50 | | |
| Average Power ² (W) | 193 248 308 351 | 4 7 — — | 4 7 5 4 | 12 30 16 12 | 4 5 3.5 3 | 15 30 20 15 | | |
| Energy Stability ³ (1 sigma)(%) | | 1 | 1 | 1 | 1 | 1 | | |
| Pulse Duration ⁴ (ns) | | 20 | 20 | 20 | 25 | 25 | | |
| Beam Dimensions ⁴ (V x H)(mm ²) | | 14 x 5 | 24 x 10 | 24 x 10 | 24 x 10 | 24 x 10 | | |
| Beam Divergence ⁴ (V x H)(mrad ²) | | 2 x 1 | 3 x 1 | 3 x 1 | 3 x 1 | 3 x 1 | | |
| Dimensions (L x W x H) | | 1282 x 375 x 793 mm ³ (51 x 15 x 31 in. ³) | | | 1682 x 375 x 793 mm ³ (67 x 15 x 31 in. ³) | | | |
| Weight | | 275 kg (605 lbs.) | | | 350 kg (772 lbs.) | | | |
| Electrical | | 230V, ±10%, 16A, 50/60 Hz switchable, 1-phase 115V, ±10%, 25A, 50/60 Hz switchable, 1-phase | | | | | | |
| Water Cooling ⁵ | | 2 to 3 l/min. (0.5 to 0.8 gal./min.), 15 to 20°C, connection: 1/2" | | | | | | |

Option

| | |
|---------------------------------|---|
| Unstable Resonator ³ | Energy 70% of stable resonator version (near field) |
|---------------------------------|---|

¹ Measured at low repetition rate.

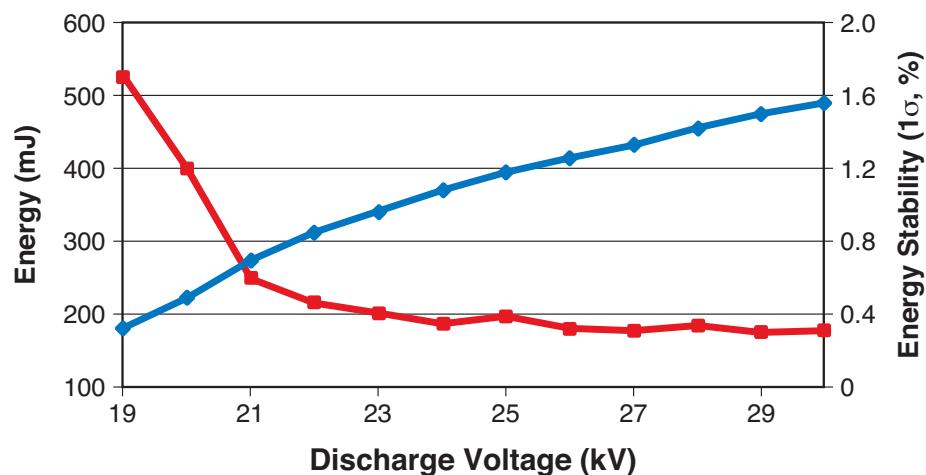
² Measured at max. repetition rate.

³ Specified at 248 nm.

⁴ Typical, FWHM.

⁵ Only required above 20 Hz repetition rate.

COMPexPro 110 pulse energy (blue) and output stability (red) over dynamic operating range

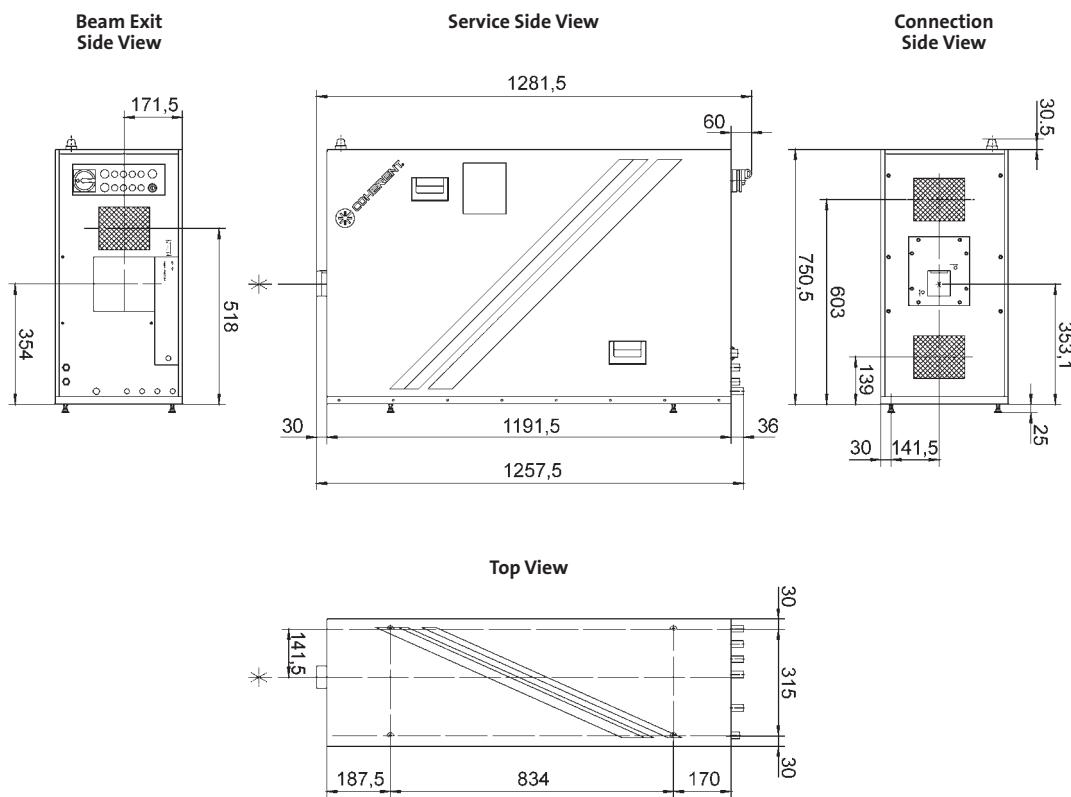


COMPexPro Series

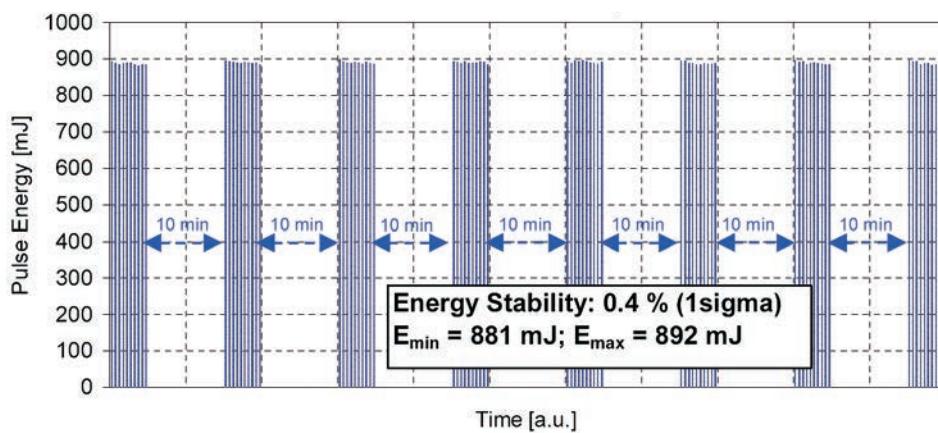
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Mechanical Specifications

COMPexPro 100



Energy stability of COMPexPro 201 at 248 nm under typical PLD operating conditions

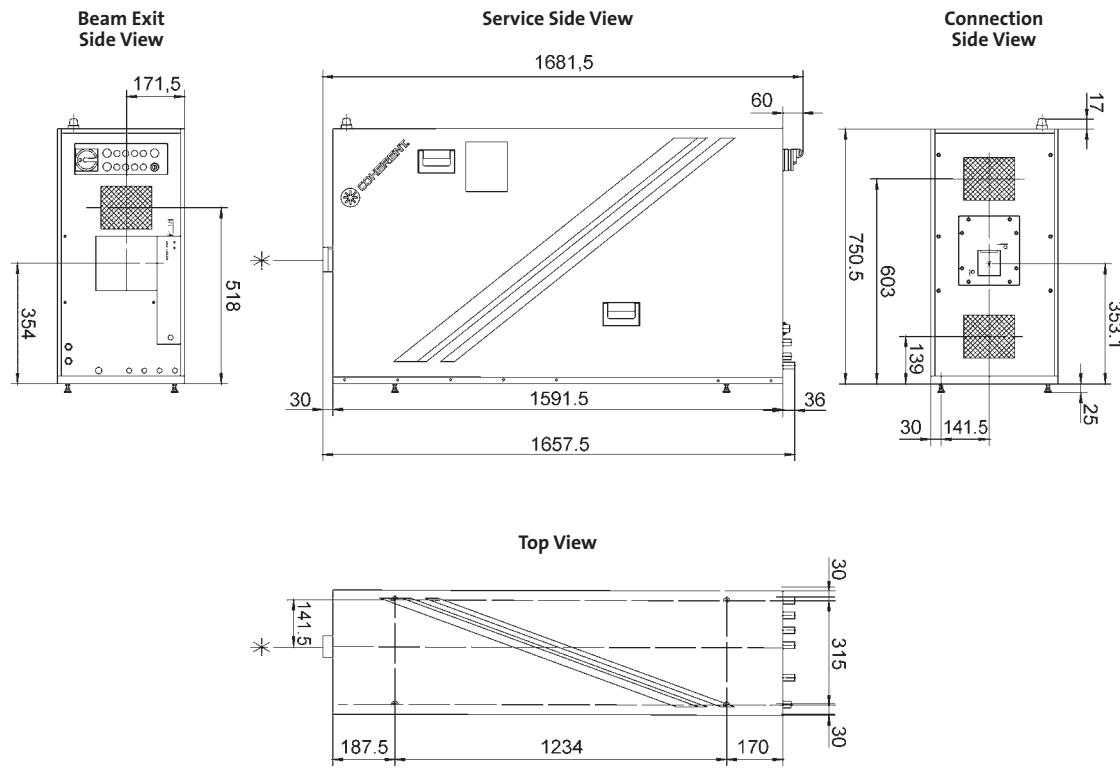


COMPexPro Series

Small Footprint High Pulse Energy Excimer Lasers

Mechanical Specifications

COMPexPro 200



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all COMPexPro lasers. For full details of this warranty coverage, please refer to the Service section at www.Cohere nt.com or contact your local Sales or Service Representative.

