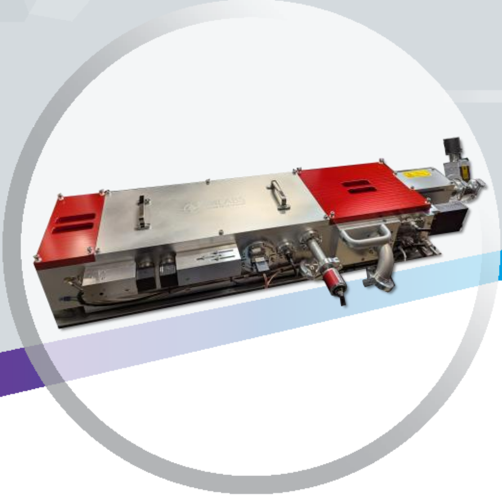
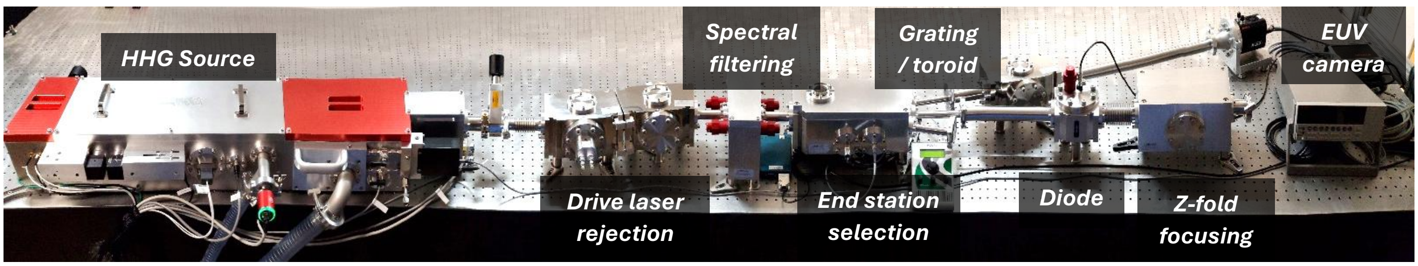
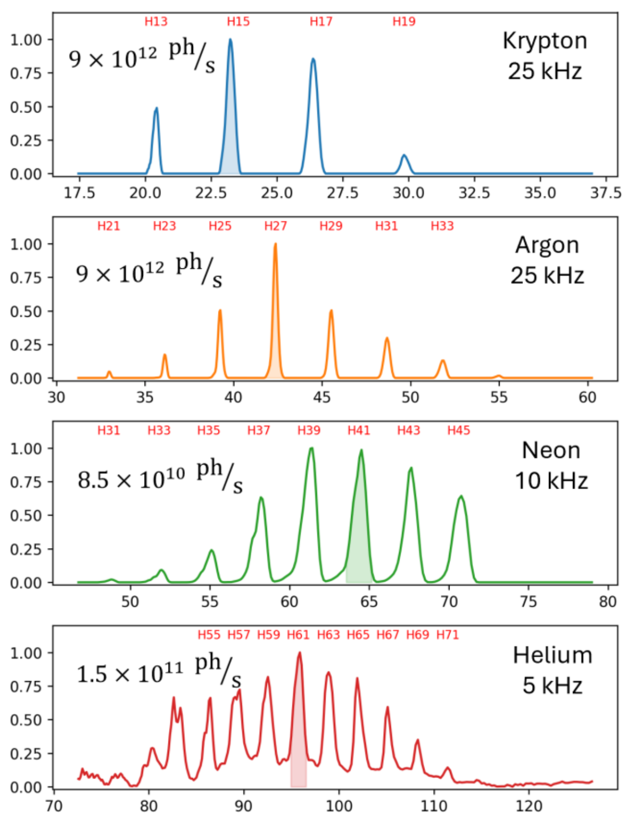
XUUS 5



KMLabs' **XUUS**™ e**X**treme **U**ltraviolet **U**ltrafast **S**ource and **A**rterium™ beamline modules

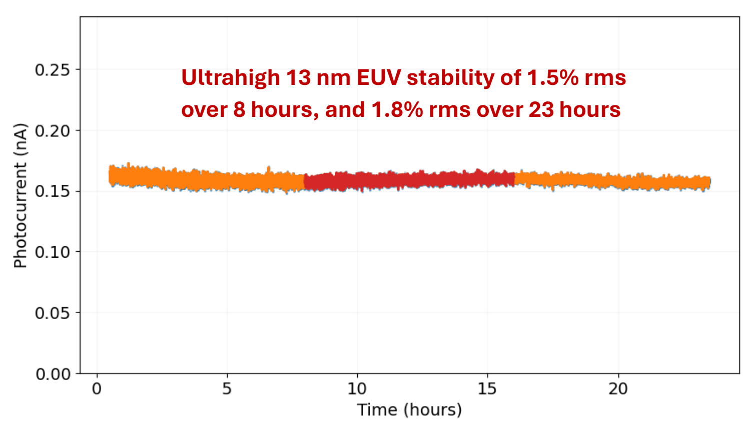
- A full solution ultrafast EUV source and beamline for your lab





XUUS 5 performance data when driven with a KMLabs RAEA 2.0 amplifier system.
*System is optimized for the shaded harmonic

EUV XUUS Source Specifications	
Wavelength Range (~0.8µm pump)	~10-60 nm
Flux	Up to 10^{13} ph/s
Intensity Stability (>8hrs)	<5% RMS
Pointing Fluctuations (>8hrs)	<5 µrad RMS
Beam Height	4.5" (1114.3 mm)
Dimensions (mm)	1200 L x 330 W x176 H



Photocurrent corresponding to the EUV spectrum centered at 13 nm (see next page)

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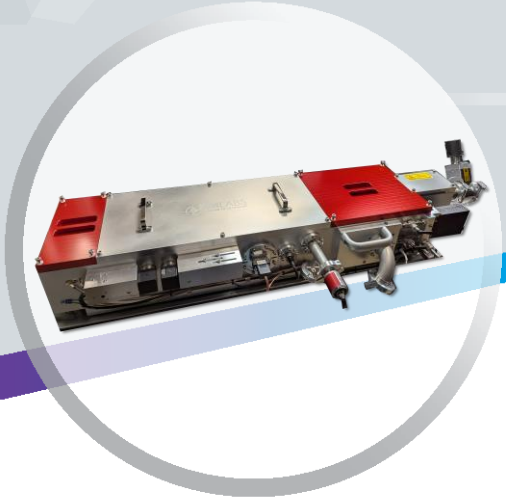
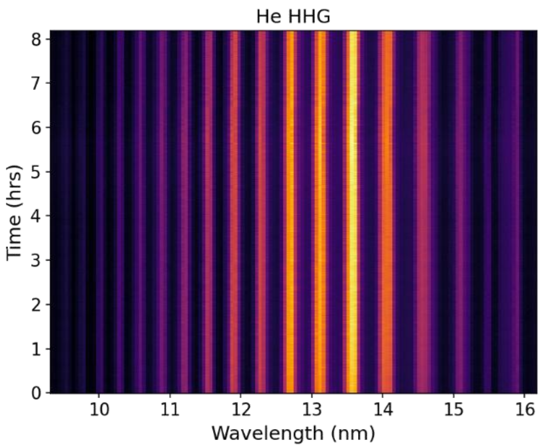
XUUS 5





XUUS 5 spectral stability over 8 hrs.
Helium gas, driven by RAEA II, is used to generate the 13.5nm output.

Coherent extreme-ultraviolet (EUV) “tabletop-scale x-ray laser” light sources are now a reality. XUUS 5 is KMLabs’ fifth generation of EUV conversion platform designed to offer “black box” conversion of ultra-short pulse laser light to short wavelengths using the high harmonic generation (HHG) process.

KMLabs’ patented use of waveguide HHG ensures repeatable, highly- stable and bright generation of EUV light with orders of magnitude lower gas usage compared with earlier HHG implementations.

Applications

- Photoelectron Spectroscopy
- Coherent Diffractive Imaging
- Time Resolved EUV Spectroscopy
- Attosecond science
- Nanoscale metrology

Features

- Coherent, High Efficiency, EUV conversion
- Low Gas Usage
- Active beam stabilization

Options

- Can be optimized for ~25-60 nm or ~10-50 nm spectral bands
- Ti:sapphire (~780 nm) or Yb (~1µm) drive lasers
- Maximum HHG flux when driven by KMLabs RAEA;

Coming soon

- Pulse shaper for programmable EUV tuning
- Higher EUV power
- Enhanced EUV focusing capabilities to ~ few µm

Application References

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