For Photoemission Electron Microscopy (PEEM), Angle-Resolved Photoemission Spectroscopy (ARPES)



The UV-X series of pulsed vacuum-ultraviolet lasers have been designed for laboratory-based, high-resolution photoelectron spectroscopy (PES) applications.

The compact geometry and flexible beam delivery system of the UV-X source facilitate easy integration into the laboratory environment.

Each UV-X consists of a high-power laser head, ultraviolet monochromator and focussing module, and wired touch-screen control interface.

Motorized optics are provided standard for hands-free alignment of the ultraviolet beam into the user chamber.

Engineering assistance is provided to customize the UV-X source and beam delivery hardware to the user vacuum apparatus.



Application for UV2 & UV3

UV-2 sources

With high timing resolution, sub - 50 psecase legith, and extent triggering capability, are recommended for time of the triggering methods.

UV-3 sources

Optimized for 50 MHz pulse repetition rate operation, in order to minimize space-charging effects in hemispherical analyzers.

Optical Characteristics

Photon energy: 10.897 eV (113.785 nm)

Pulse duration:

UV-2: < 50 psec, UV-3: < 20 psec

Repetition rate:

UV-2: < 0.5-5 MHz, UV-3: < 50 MHz

Average power: $> 10 \mu W (1E+13 \text{ photons/sec})$

Pulse bandwidth: < 0.1 meV (0.001 nm)

Polarization: Linear/horizontal

Beam size at sample: < 0.25 mm FWHM

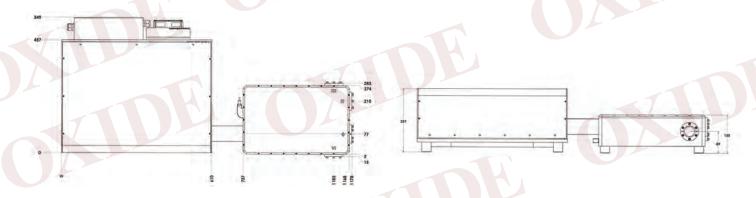
Beam height: < 4.00" (101.6 mm)



Options

- 1. 11eV Flux Control option
- 2. Polarization Control option
- 3. Focus Enhancement option
- 4. UV-X-ACC option
 Accessory hardware package
 to adapt UV-3 laser to UHV
 PES system

Dimensions





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