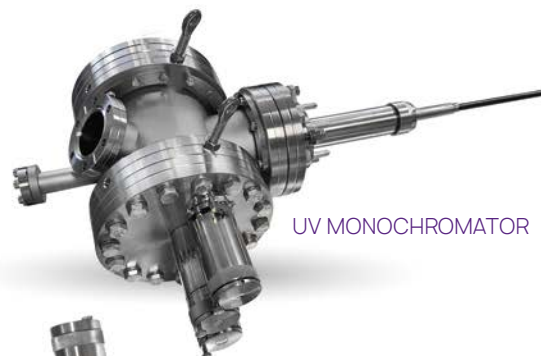


# HIGH-POWER, MONOCHROMATIZED UV SOURCE

for the study of nanostructures



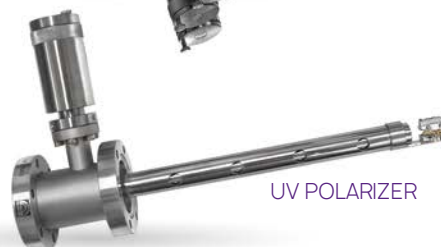
UV SOURCE  
UVS 40A2



UV MONOCHROMATOR



UV SOURCE POWER SUPPLY  
UV40A-PS



UV POLARIZER

for PES | ARPES | UPS applications

## DESCRIPTION

PREVAC monochromated UV Source use Bragg diffraction to separate narrow band of light wavelengths. During crystal rotation user can find 4 different wavelengths of beam transferred to sample. It happens because each wavelength is reflected by crystal at different angle (Bragg reflection). So called ZERO ORDER beam - creates when monochromator crystal works similar as normal mirror - it reflects multiple wavelengths and gives highest intensity of transferred beam. That mode can be used when user does not need monochromated beam, but high intensity of UV radiation.

## APPLICATIONS

- Characterization of the valence band dispersion
- Fermi surfaces
- Charge density wave gaps
- Superconducting gaps
- Spin density wave gaps
- Electron-boson coupling
- Heavy fermion hybridization gaps
- Spin momentum locking
- Surface states

## FEATURES

- Manual or auto ignition
- Easy operation
- Stable output
- Retractable capillary arm

## TECHNICAL DATA

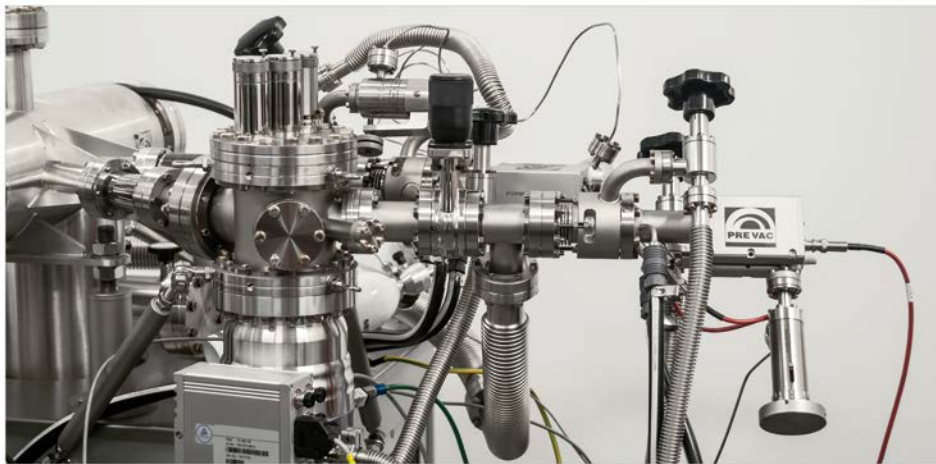
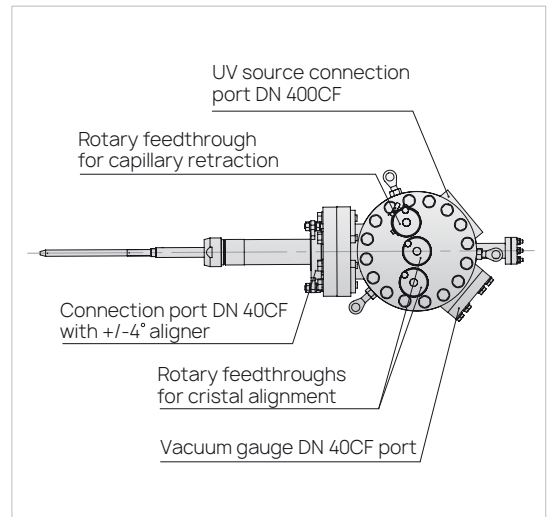
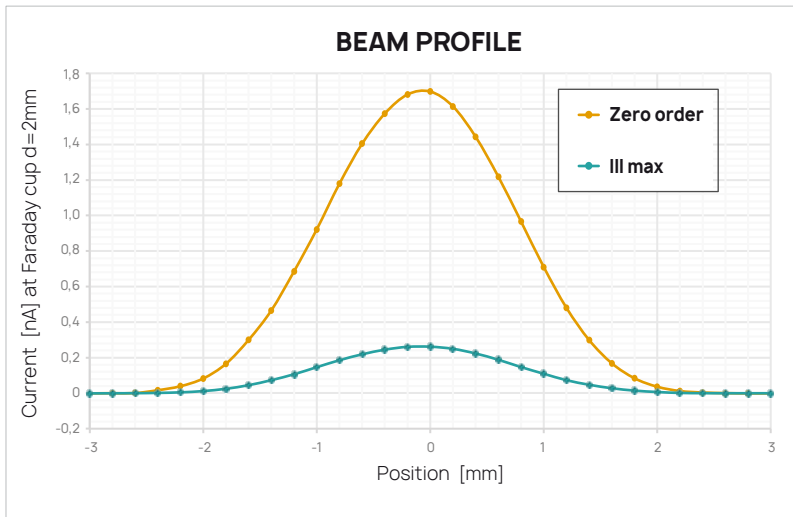
|   |  |
|---|--|
| Mounting flange   | DN 40 CF (non-rotatable)   |
| Photocurrent  | 1-12 nA  |
| Discharge current   | 40-300 mA  |
| Port aligner  | integral, +/- 4°   |
| Retractable capillary<br>- distance from focus<br>point to port | 350 mm   |
| Capillary I.D.  | 1.6 mm   |
| Insertion length  | 345 mm with extended capillary<br>289 mm with inserted capillary |
| Typical working<br>distance                                     | 5 mm   |
| Bakeout temperature   | up to 150 °C   |
| Working pressure  | < 1 mbar   |

## OPTIONS

- Gas dosing system
- Differential pumping (required)
- in situ UV polarizer



**NOTE** | Water cooling and differential pumping is required.



- Full UV set includes:
- UV source UVS 40A2
  - UV monochromator
  - UV polarizer (optional)
  - power supply UV40A-PS

## UV SOURCE POWER SUPPLY UV40A-PS



### DESCRIPTION

The UV40A-PS can work in either constant discharge current or discharge voltage mode to provide the best operation conditions for the UV source. The source can be automatically ignited directly from the power supply or manually on the source via a piezo-electric igniter. All adjustable parameters are clearly displayed on the large front-panel TFT and precisely controlled via digital encoders. The unit also features a built-in timer and automatic standby mode. The UV40A-PS is supplied as a full width 19 rack mounting unit (3U height). Easy firmware update via USB port. The unit can be remotely controlled via RS232/485 or Ethernet interfaces. The unit is equipped with autosave function (the device save your parameters, preset and apply them automatically after restart).

### TECHNICAL DATA

|                                    |  |
|------------------------------------|--|
| Supply voltage                     | 100 - 120 VAC/200 - 240 VAC, 50/60 Hz (power consumption max 800 W)  |
| Output power                       | 300 W  |
| Discharge voltage ( $U_{source}$ ) | 200 - 1000 V, resolution 10 V, ripple < 0.5 V <sub>pp</sub>  |
| Discharge current ( $I_{emis}$ )   | 5 - 300 mA, resolution 1 mA  |
| Vacuum measurement (optional)      | CTR90, TTR91, TTR211, PTR225, PTR90, ITR90, ITR100, Baratron, ANALOG IN, MKS937A, PG105, MG13/14, PKR251/360/361, PCR280, ATMION |
| Communication interface            | RS232/485, Ethernet  |
| Communication protocol             | MODBUS-TCP   |
| User interface                     | 7" TFT display with touchscreen, digital encoder   |
| Interface languages                | English, German, Polish  |
| Dimensions                         | 448.8 × 132.5 × 435 mm (W×H×D), 19" rack mountable   |
| Weight (approx.)                   | 9.3 kg   |

### OPTIONS

- Analog I/O card for vacuum measurement (1 gauge)



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