scientaomicron

Hot filament ion source for sputter etching and depth profiling

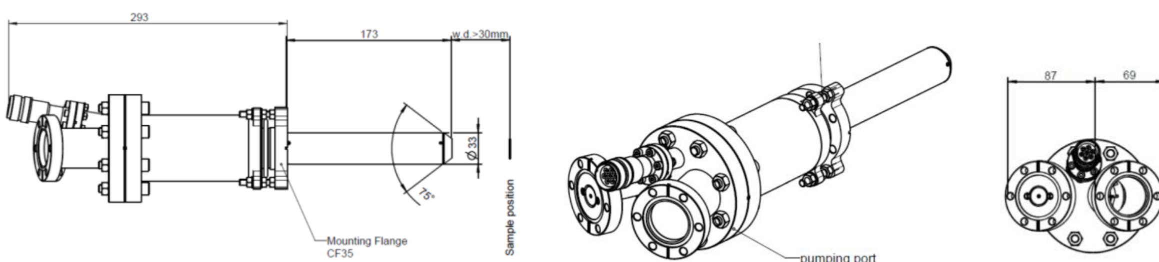
Features:

This cost-efficient and easy to use ion sputter source allows sputter cleaning, charge neutralization, as well as basic depth profiling with a Gaussian beam shape.

With a variable spot size of 300 µm-300 mm and a possible working distance in the range of 30-300 mm this ion source is flexible to use for a wide range of applications. A beam current regulation correction and a regulated leak valve ensure stable physical conditions while obtaining a depth profile.

Technical data:

- High current densities > 2 mA / cm² at 5 kV beam voltage
- Maximum ion current > 10µA
- Energy range 400 eV – 5 kV
- Working pressure 2·10-7 - 5·10-8 mbar
- Mounting flange DN40 CF, working distance 30 – 300 mm with an insertion depth of 173 mm
- Variable spot size from 300 µm to 300 mm
- Port for differential pumping
- Bakeable up to 180 °C
- Integrated port aligner, allows for ± 3° adjustment range
- Standalone operation or software controlled



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Summary

Part Number: PNxxxxx-S

Parts included:

- FDG 15 sputter source
- Control panel FDG CU (can work standalone or software controlled)
- Gas inlet system with fully bakeable regulated leak valve
- Software for remote operation

Prerequisites:

- UHV system with base vacuum < $5 \cdot 10^{-9}$ mbar
- Free port DN40CF for sputter source

Options (on request):

- Differential pumping with system integration
- Automatic depth profiling
- Low energy mode down to 10 eV for charge neutralization

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