FOX 2D
focusing multilayer optics

FOX2D CU 25_25P focusing optics

Based on Xenocs' innovative single reflection design, the *FOX2D CU 25_25P* offers the best flux-divergence compromise to concentrate highest intensity on a tiny focal spot. As a perfect extension of the existing FOX2D product range, this new optics enables small samples analysis in the laboratory even with large x-ray sources.

Benefits

- enhanced useful flux due to the **SINGLE REFLECTION ADVANTAGE** compared to standard two-reflection designs
- enhanced signal to noise ratio for small samples
- small spot at focus
- enhanced lifetime and lower cost of ownership (under vacuum)
- compact mechanical design
- easy to align (10 minutes procedure)
- adaptable to all x-ray generators (rotating anode generators, sealed tubes or micro-focus sources)
- no direct beam (x-ray safety procedure)

Applications

- small samples
- protein crystallography
  - high throughput screening
  - structure determination on small samples (i.e. 150µm)
- micro diffraction
- x-ray reflectometry

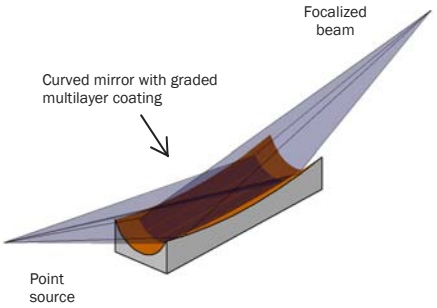
Optional Accessories

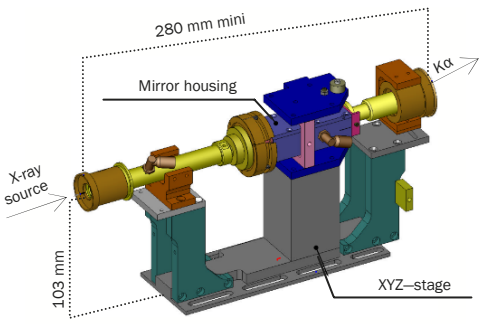
- alignment camera
- collimator
- vacuum pump
- stand

Subject to technical changes without notice

Technical Data

Beam features	
wavelength	1.54Å / 8keV (Cu Kα)
typical flux at the focal point	$3.5x10^7$ photon/s for a 35x35 µm² source at 64W $9x10^8$ photon/s for a 300x300 µm² source at 5KW
collected angle	5.3 mrad (0.30°) for the 2 planes
spectral purity at Kα	> 97%
Kβ contamination	typically <0.3%
Optical features	
spot size at the focal point	<80 µm with a 35 µm micro focus source 300 µm with a 300 µm source
divergence	5.3 mrad (0.30°) FHWM for the 2 planes
distance from source to optics centre	25 cm
distance from optics centre to focus	25 cm
substrate with optimized shape	ellipsoidal
Mechanical features	
overall FOX2D system length	from 280 to 310 mm
mirror length	60 mm
reversible mechanical housing	6° take off angle ±2 x Bragg angle
tilt and incidence micrometric screws for a simple and sensitive adjustment	10° total range (both axes) movement in vertical (tilt) and horizontal (Bragg) directions
XYZ adjustment table	14x14x5 mm^3 stroke
Vacuum features	
primary vacuum housing	longer lifetime and lower cost of ownership
Kapton® windows	loss per window : 0.75%
dry vacuum pump	working pressure : 3 mbar pumping speed : 0.6 m^3/h voltage : 220V or 110V





Design for MAR® detectors

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Reflecting Future Technology

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