FOX2D
focusing multilayer optics

FOX2D CU 12_38P focusing optics

The UNIQUE combination of the precision graded multilayer coating along the mirror length with a single mirror substrate allows the capture of a part of the source larger than any other multilayer mirror system of equivalent length.

This design brings more flux to your sample.

Benefits

- enhanced useful flux due to the **SINGLE REFLECTION ADVANTAGE** compared to standard two-reflection designs
- reduced collection time
- 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

- protein crystallography
  - high throughput screening
  - structure determination
- powder diffraction

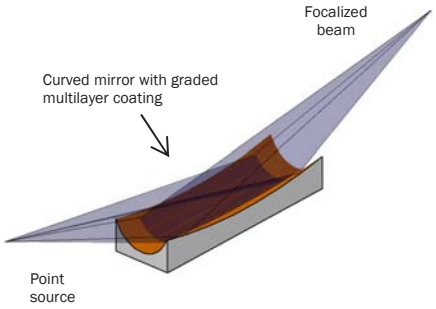
Optional Accessories

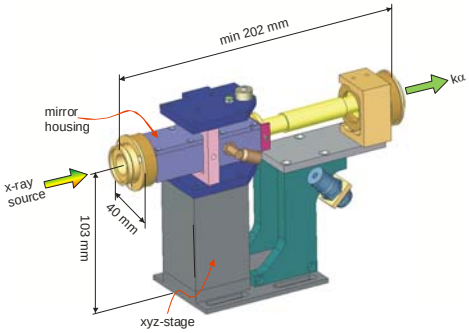
- alignment camera
- collimator
- vacuum pump
- stand

Technical Data

Subject to technical changes without notice

Beam features	
wavelength	1.54Å / 8keV (Cu Kα)
flux gain	from 2 to 6 compared to other optics
typical flux	$4x10^9$ photons/s at the focal point for a 0.3 x 0.3 mm^2 source at 5 KW
collected angle	11.4 mrad (0.65°), for the 2 planes
spectral purity at Kα	>97%
Kβ contamination	typically < 0.3%
Optical features	
spot size at the focal point	0.35x0.35 mm^2 for a 0.1x0.1 mm^2 source
divergence	3.7 mrad (0.22°) FWHM for the 2 planes
distance from source to optics centre	12 cm
distance from optics centre to focus	38 cm for a 0.1x0.1 mm^2 source
precision graded multilayer	designed for the best compromise between reflectivity and total flux
substrate with optimized shape	elliptical
Mechanical features	
overall FOX2D system length	202 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

DMC-040129-FOX2D CU 12_38P-TDS-05

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