



Based on Xenocs' innovative single reflection concept, the FOX2D CU 12_60L geometry is designed for the coupling with a channel cut monochromator. With its original focussing-collimating geometry, this mirror pre-shape the x-ray beam to increase the flux which goes through the monochromator onto your sample.

This solution provides highest brilliance on a tiny spot.

Benefits

- enhanced useful flux due to the **SINGLE REFLECTION ADVANTAGE** compared to standard two-reflection designs
- 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 microfocus X-ray generators.
- no direct beam (X-ray safety procedure)

Applications

- high resolution diffraction when couple with monochromator
- thin film metrology
- small sample analysis
- mapping

Optional Accessories

- alignment camera
- pindiode detector
- collimator
- vacuum pump
- stand

Technical Data

Subject to technical changes without notice

Beam features

■ wavelength	1.54Å / 8keV (Cu Kα)
■ typical flux Source 20 μm run at 40kV, 24W	4x10 ⁷ photon/s after the mirror 3.5x10 ⁶ photon/s after a Ge 004 Asym crystal
■ collected angle	11.4 mrad (0.65°), for the 2 planes
■ spectral purity at Kα	> 97% (without monochromator)
■ Kβ contamination	typically <0.3% (without monochromator)

Optical features

■ spot size Source 20 μm run at 40kV, 24W	180 μm x 2000 μm at focal point 180 x 180 μm ² after a Ge 004 Asym
■ divergence	0.5 mrad FWHM in the collimating plane 2 mrad FWHM in the focusing plane
■ distance from source to optic centre	12 cm
■ distance from optic centre to focus	60 cm
■ substrate with optimized shape	parabolic

Mechanical features

■ overall FOX2D system length	190 mm
■ mirror length	60 mm
■ 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% (Kapton® foil)
■ dry vacuum pump	working pressure : 3mbar pumping speed : 0.6 m ³ /h voltage : 220V or 110V

