

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 resolution (q_{\min} reduction)
- enhanced lifetime and lower cost of ownership (under vacuum)
- compact mechanical design
- easy to align (10 minutes procedure)
- fits all X-ray generators (rotating anode generators, sealed tubes or micro-focus sources)
- no direct beam

Applications

- SAXS (Small Angle X-ray Scattering)
- high resolution system (coupled with a monochromator)

Optional Accessories

- alignment camera
- collimator
- crystal monochromator
- vacuum pump
- stand

Technical Data

Subject to technical changes without notice

Beam features

■ wavelength	1.54Å / 8keV (Cu Kα)
■ beam size (at the mirror exit)	1.2x1.2 mm ²
■ typical flux gain	from 2 to 6 compared to other optics
■ typical flux	≥ 10 ⁹ photons/s Source 300 μm run at 40Kv, 80mA (3,2 Kw)
■ beam uniformity	± 15% [(I _{Max} - I _{Min}) / (I _{Max} + I _{Min})] for a 300 x 300 μm ² point source
■ collected angle	11.4 mrad (0.65°), for the 2 planes
■ Kα spectral purity	>97%
■ Kβ contamination	typically <0.3%

Optical features

■ divergence	1 mrad FWHM (for the 2 planes with a 0.1x0.1 mm ² source)
■ distance from source to optics centre	12 cm
■ precision graded multilayer	designed for the best compromise between reflectivity and total flux
■ substrate with optimized shape	parabolic

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% (Kapton®)
■ dry vacuum pump	working pressure : 3 mbar pumping speed : 0.6 m ³ /h voltage : 220V or 110V

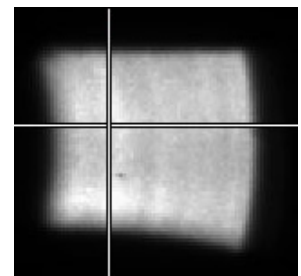
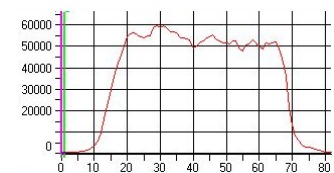
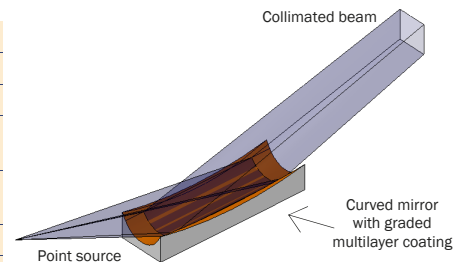


Image of the collimated Cu-Kα x-ray beam, 80 mm after the mirror centre taken with a CCD camera with 23 μm pixel size. The beam dimensions (FWHM) are: H = 1.18 mm, V = 1.07 mm.

DMC-040129 - FOX2D CU 12_INF - TDS - 04