

Focusing multilayer optic FOX3D CU 14_39P

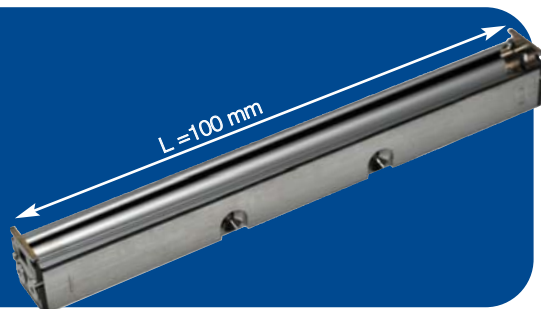


Fig.1: The FOX3D CU 14_39P single Bragg reflection multilayer optic features a precision aspheric substrate.

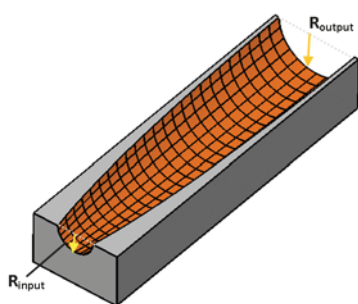


Fig.2: FOX3D CU 14_39P schematic concept showing the optic's aspheric form (ellipsoid of revolution).

Principal Features

- single Bragg reflection optic
- high efficiency multilayer coating
- aspheric substrate (ellipsoid)
- high collection angle

Benefits

- enhanced X-ray beam intensity
- very high flux density
- excellent beam focusing
- low cost of ownership (under vacuum)
- easy to align
- adaptable to all rotating anode generators & micro focused sealed tubes

Applications

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

Optional Accessories

- alignment camera
- collimator
- vacuum pump
- alignment stage

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Xenocs introduces the FOX3D CU 14_39P and raises once again the performance level of its optics helping its customers to improve the data quality and to accelerate the measurements in challenging diffraction applications.

Based on the latest progress in manufacturing technology the FOX3D CU 14_39P features an optimized high precision ellipsoidal substrate and a state-of-the-art multilayer to achieve a beam with improved focusing properties and high flux density. Its well defined beam and the significant flux density give rise to very small diffraction spots and to a considerable improvement of the signal to noise ratio as observed during customer evaluation testing on small and weakly diffracting crystals.

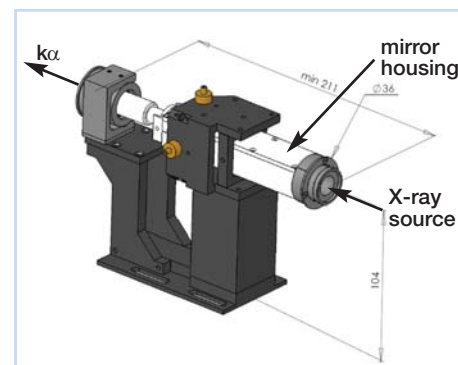


Fig.3 : Optional Alignment Box (Design for MAR@ detectors)

The proven performance level of the FOX3D CU 14_39P makes it an ideal solution for applications that require enhanced data quality or reduced data collection time such as small crystal structure determination and high throughput screening.

Preliminary Technical Data

Subject to technical changes without notice

Beam features

- Wavelength 1.54 Å / 8 keV (Cu K α)
- Integrated flux (vacuum, 1200W/70 μ m source) > 4.5 x 10⁹ photons/sec
- Total divergence 5.4 x 5.4 mrad
- Spot size at focus (FWHM, 1200W/70 μ m source) ~230 μ m

Optical & Mechanical features

- Nominal distance from source to optic centre 140 mm
- Nominal distance from optic centre to focus 390 mm
- Nominal mirror length 100 mm
- Substrate with optimized shape Ellipsoid of revolution
- Mechanical dimensions (L x H x W) 102.8 mm x 12.1 mm x 10 mm

Optional Alignment Box

- Primary vacuum housing Optic protection and reduced absorption
- Kapton® windows Loss per window : 0.75%
- Dry vacuum pump Working pressure : 3 mbar
Pumping speed : 0.6 m³/h
Voltage 220 or 110V