

# Enhance Ultra High Intensity Copper X-ray Source

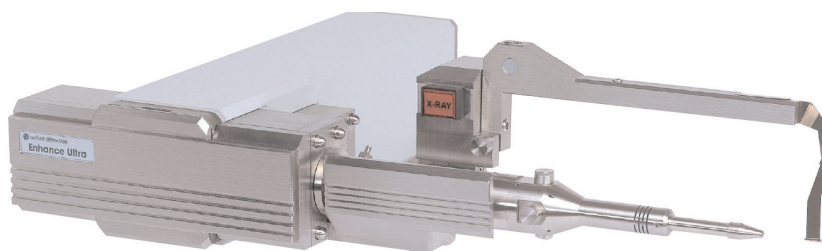
## Data Sheet

### Highlights

- 300 micron beam diameter
- Superior data quality to a 5 kW rotating anode with multi-layer optics
- Virtually no downtime
- Very low cost of ownership
- Easy to align and use
- Compact size

Enhance Ultra is an integrated X-ray source producing a 300 micron high intensity X-ray beam suitable for protein crystallography at copper wavelengths. Enhance Ultra builds on the Agilent Technologies patented Enhance technology and incorporates graded multilayer optics. Flux on the sample is comparable to a standard rotating anode (with multilayer optics), but from a sealed tube.

The Enhance Ultra source is incredibly easy and cheap to maintain, with no expert knowledge required. Since it is based on reliable sealed tube technology, with no moving parts in vacuum, Enhance Ultra is much less prone to break down than other generator technologies, resulting in negligible downtime. Routine maintenance involves exchanging the X-ray tube about once per year, a procedure which takes less than 30 minutes. Consequently, the cost of ownership of an Enhance Ultra is unbelievably low – up to 10 times less than for rotating anodes.



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Enhance Ultra is specifically designed for home laboratory protein crystallography, and is extremely compact and easy to use. The source can be mounted on any of the Agilent Technologies range of diffractometers such that the entire system footprint is only one square metre. Alignment with the sample is easy since the entire pre-aligned assembly is simply re-oriented on a mounting bracket. The Enhance Ultra has an integrated fast shutter and a specially designed beam-stop which can be rotated out of position for easy access to the goniometer during sample mounting.

The Enhance Ultra requires cooling of the X-ray tube and this is provided by the Agilent Technologies closed circuit X-ray tube water chiller unit.

#### Technical data

X-ray focal spot	300 micron
Maximum generator output	3 kW
Dimensions	326 × 456 × 84 mm
Weight	20 kg
Integrated fast shutter response speed	3 msec

## Upgrade to the Ideal X-ray Source for Both Protein and Small Molecule Applications

- Hi-flux molybdenum source for small molecule and
- Hi-brilliance copper source for proteins

Available to buy outright or as an upgrade, the Enhance Ultra can be co-mounted alongside the Agilent Technologies hi-flux molybdenum Enhance thus providing an X-ray source which is ideal for both small molecule and protein applications.



Co-mounted Enhance Ultra (Cu) and Enhance (Mo) X-ray sources.

## For More Information

For more information on our products and services, visit our Web site at [www.agilent.com/chem](http://www.agilent.com/chem)

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© Agilent Technologies, Inc., 2008  
Printed in the USA  
November 1, 2010  
SI-A-1384



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