Nanofocus X-ray module FYNE 160 NF4

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Reliably delivering 400 nm resolution balanced with optimized dose settings, FYNE provides precise inspection of the most advanced samples without satrificing efficiency. Our balanced approach empowers faster, more detailed analysis in cuttingedge applications in advanced packaging, materials science and NDT inspection.

Superior focal spot stability

Reliable nanoscale imaging goes together with great source stability. The FYNE module ensures exceptional focal spot stability during extended imaging sessions, meaning you can operate with peace of mind.

Uninterrupted performance

Advanced filament technology extends the lifespan by 10 times compared to our previous open tube technology, enabling thousands of hours of uninterrupted inspection. By significantly reducing the frequency of maintenance and associated disruptions, this advancement maximizes operational uptime.

FYNE delivers a balanced solution that combines precision, reliability, and efficiency.

The FYNE module package

Nanofocus X-ray tube

High dose transmission target, internally cooled active focusing optics, a turbopump, vacuum sensor, and a serviceable beam chamber.

High voltage power supply

Power supply including a flexible, springloaded HV cable with configurable length.

Control panel

PLC, safety circuitry, power supply, focusing optics control, and also external roughing pump and chiller.

Integration tools

Web UI for quick operation, including software libraries, and documentation for integration.

Spare parts

All wear parts of the FYNE module can be replaced. Typical wear parts are emitter-units, X-ray targets, and O-rings.

Typical applications

The FYNE's high penetration power at 160 kV and instant stability make it ideal for micro-CT applications in semiconductor, electronics, battery, NDT and pre-clinical applications.

- Semiconductor packaging and interconnects
- Wafer-level chip-scale packages WLCSP
- Microelectromechanical systems MEMS
- Optical components
- Battery cell inspection
- Cables, conduits, and plastics
- Small animal imaging
- Soft tissue imaging and scaffolding
- Medical implants and devices

Specifications

FYNE-160.NF4

HV range	60 to 160 kV
Emitter type	LaBó
Max. target power	6 W *
Target material	Tungsten
Permanent filtration	Carbon
Beam angle	170°
Min. focus object distance	300 µm
Max. resolution	400 nm
Focal spot stability	<0.1 µm/h
Microfocus tube W, H, L	164, 264, 575 mm
Weight	28 kg
HVPS W, H, L	318, 232, 741 mm
Weight	37 kg
High voltage cable	R24 Spring loaded connectors
Diameter	29 mm
Bending radius, static / dynamic	58 / 116 mm
Control panel W, H, L	697, 876, 166.5 mm

* Target power is not a good indicator of dose * JIMA RT RC-02B

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