



Cooled transmission nanofocus X-ray module

FXE 160 nano CT



Stability equals precision

With its 15 W of transmission target power, you get a bright and highly resolving source for quick acquisition at high magnification. The cooled tube enables continuous and stable operation at up to 160 kV allowing for 3D inspection of complex multilayer parts. True X-ray Intensity - TXI helps deliver constant picture contrast resulting in a flicker-free acquisition that ensures the integrity of your inspection results.

Flexibility for a wider range of operation

You can't quantify what you can't see: With the Comet FXE you can detect, identify and measure features from a few millimeters to 0.6 μm . Combined with a high performing detector, this multi-focus tube delivers superior analysis capability with a wide range of detail detection, plus the flexibility to either operate at highest resolutions possible or exploit high power at a decent resolution.

Unlimited lifetime

Our modular design facilitates quick replacement of critical parts, making the FXE's total cost of ownership among the lowest in its class. You'll never have to worry about running the tube at its limit, as you can always replace the wear parts - even though the tube is designed to last, well beyond the expected life cycle of the module.

Easy to use for a faster workflow

Our user-friendly interface gives quick access to all major functions, including kV, tube current or target power, start-up routines, and focus adjustment. The Comet FXE is built to accelerate workflow creation for both you and your end-user.

comet
x-ray

The FXE module package

Nanofocus X-ray tube

High power transmission target, cooled active multi-focus optics, a turbopump, vacuum sensor, and a serviceable beam chamber.

High voltage power supply

Power supply including a flexible HV cable with configurable length.

Control cabinet

PLC, safety circuitry, roughing pump, integrated cooler, power supply, and focusing optics control.

Integration tools

GUI for quick operation, including software libraries, and documentation for integration.

Spare parts

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

Typical applications

Electronics inspection

- Soldering joints on circuit boards - PCB
- Ball grid arrays - BGA
- Integrated circuits - IC
- Bonding wires

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

Comet X-ray

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Specifications

FXE 160.51-c

HV range	20 to 160 kV
Max. tube current	1000 μ A
Max. tube power	64 W
Max. target power	15 W
Target	High power High resolution power
Permanent filtration	Carbon
Beam angle	170°
Min. focus object distance	< 300 μ m
Focus modes	
Nano, max. resolution*	< 0.9 μ m
Micro, max. resolution*	< 2 μ m
High power, max. resolution*	< 5 μ m
Microfocus tube W, H, L **	183, 319, 530 mm
Weight	27 kg
HVPS W, H, L	210, 425, 534 mm
Weight	39 kg
High voltage cable	R24 Connectors
Diameter	29 mm
Bending radius, static / dynamic	60 / 120 mm
Control Cabinet W, H, L	800 * 1300 * 550 mm

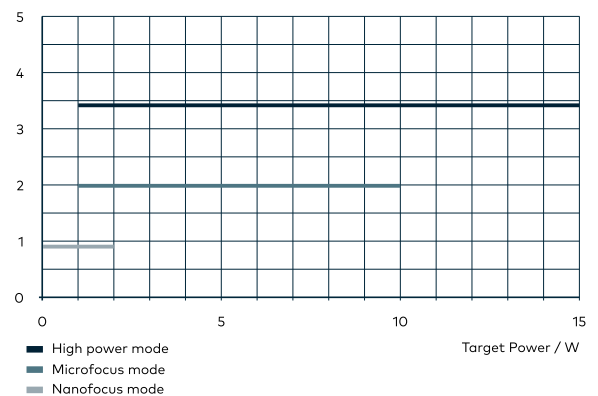
* JIMA RT RC-02B

** STEP files available on request.

Spot size / focus mode

Three focus modes allow you to adapt the combination of power and resolution to match your inspection task.*

Focal Spot Size (FWHM) / μ m



* Typical focal spot sizes (full width half maximum) at 160 kV as estimated based on best practices - no standards apply. Obtainable resolutions depend highly on system settings and cannot be warranted.