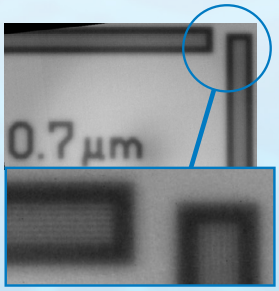
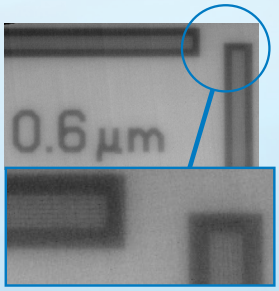


40kV, 2.0W. Onyx detector.
Unfiltered. POWER mode.



100kV, 6.0W. Onyx detector.
Unfiltered.



160kV, 20W. Onyx detector.
Unfiltered.

JIMA

JIMA Resolution Operating voltage	Typical @min. power	Typical @max. power	Best achieved
40kV	0.7	0.7	0.6
70kV	0.7	0.7	0.7
100kV	0.7	0.7	0.7
130kV	0.6	0.6	0.6
160kV	0.6	0.6	0.5



XT

NORDSON NT4

X-ray Tube

The Nordson NT4 is a performance-leading microfocus X-ray tube comprising proprietary technology to achieve a high brightness output. The tube consists of a LaB_6 crystal source for generation of the electron beam, a magnetic beam steering system, and a tungsten target for X-ray photon emission. The components are mounted in a precision-engineering housing and held at ultra-low vacuum levels for long-life performance.

This 4th generation of tube across a wide energy range from 30 kV to 160 kV is highly configurable through a software interface to the internal control board, which is connected via an optical interface (through an Ethernet converter).

www.nordson.com/TestInspect

NORDSON HV160

High Voltage Power Supply Unit

To complement the X-ray tube, the Nordson HV160 is a high voltage power supply unit which has been developed to maximise tube performance and lifetime by optimizing the current draw from the source according to the requested kV and W. It offers a unique level of stability to the tube, ensuring long runs at a consistent brightness level and low spot drift. The tube and power supply are connected using a High Voltage cable and digital control interface.

Nordson

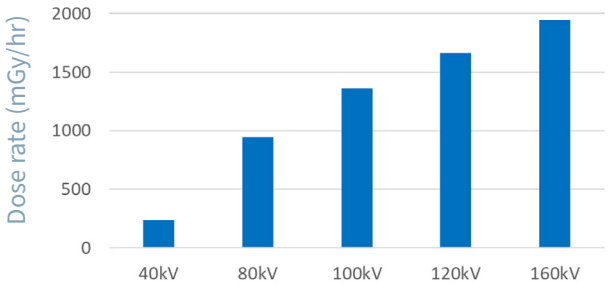
Test & Inspection

NORDSON NT4 & HV160 **X-ray Tube and High Voltage Power Supply Unit**

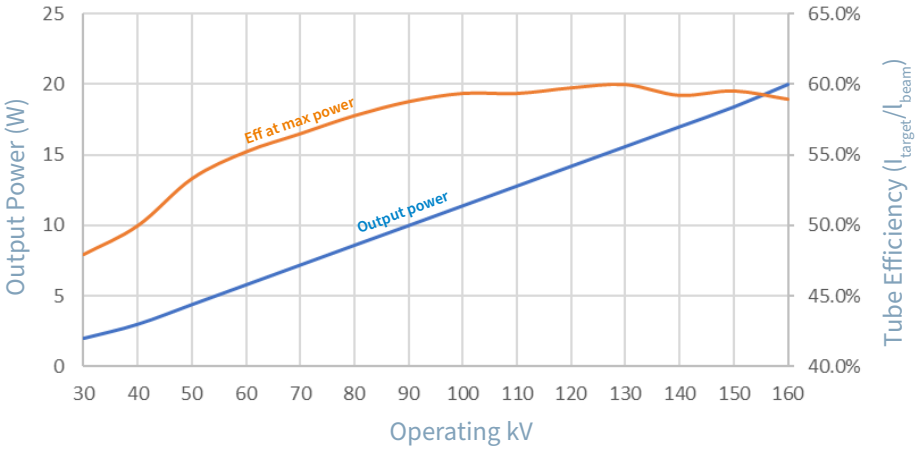
Features & Benefits

- High brightness
- High magnification
- 100 nm feature recognition
- Wide angle exposure
- Zero maintenance
- Sealed transmission tube technology

Typical X-ray dose rate at FDD 450mm 75uA target current



Output power and tube Efficiency



General	
Target technology	Tungsten transmission target
Electron source	LaB_6
Tube kVp range	30kV (min) to 160 kV (max)
Tube current range	0 to 400 µA
Maximum tube power	20 W (125 µA target current)
kVp stability	+/-0.1 kV
Target material	+/-0.2 µA
Duty cycle	1
Filter material	0.2 mm carbon
Radiation glancing width	From point source
Radiation irradiation time	From a few seconds up to 20 hours
Radiation regulating method	Nordson HVPSU and associated control systems
Tube Collimation	None
Operating temperature range	10° C to 30° C
Beam movement	Internal magnetic beam shift

Beam characteristics	
Beam orientation	Uniform cone
Cone beam angle	175°
Min. feature recognition	0.1 µm in POWER mode
JIMA chart resolution	See page 1
Min. focus to object distance	0.5 mm
Focal spot drift (maximal distance)	4 µm (after thermal stabilisation)
Connections & cables	
Tube supply voltage	24 V_{dc} at 8 A
HVPSU mains supply voltage	240 V_{ac} single phase
HVPSU power	345 W (max)
HVPSU to tube: control & data	Optical (digital)
HVPSU to tube: HV power	Ø32 mm HV cable
Safety interlock	Switched mains
Mechanical	
Tube external dimensions	362 × 233 × 417 mm
Tube weight	33 kg
HVPSU external dimensions	230 × 448 × 538 mm
HVPSU weight	50 kg

For more information, speak with your Nordson representative or contact your Nordson regional office

Nordson Test & Inspection Europe
ti-sales-eu@nordson.com

Nordson Test & Inspection SEA
ti-sales-eu@nordson.com

Nordson Test & Inspection Africa
ti-sales-eu@nordson.com

Nordson Test & Inspection Americas
ti-sales-us@nordson.com

Nordson Test & Inspection China
ti-sales-cn@nordson.com

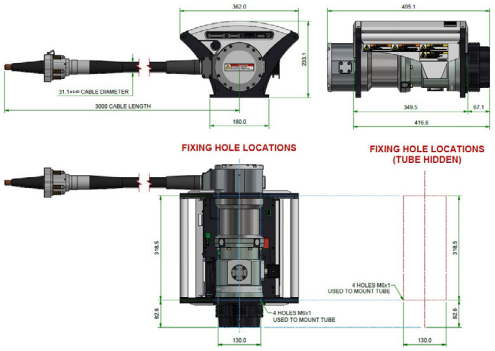
Nordson Test & Inspection Japan
ti-sales-jp@nordson.com

Nordson Test & Inspection Singapore
ti-sales-sg@nordson.com

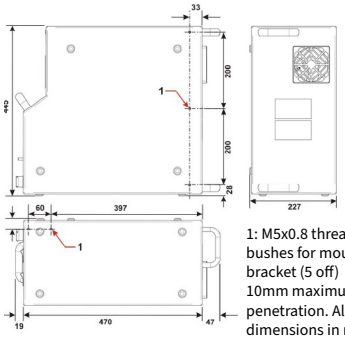
Nordson Test & Inspection Taiwan
ti-sales-tw@nordson.com

Nordson Test & Inspection Korea
ti-sales-korea@nordson.com

NORDSON NT4



NORDSON HV160 HVPSU



1: M5x0.8 threaded bushes for mounting bracket (5 off) 10mm maximum penetration. All dimensions in mm.

www.nordson.com/TestInspect

DS-Nordson-NT4&HV160-230426-EN

Nordson
Test & Inspection