OPTO-EDU A63.7010 EBL Electron Beam Lithography Machine

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: CNOEC, OPTO-EDU
- Certification: CE,
- Model Number: A63.7010
- Minimum Order Quantity: 1 pc
- Price: FOB $1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 180 Days
- Payment Terms: T/T,West Union,Paypal
- Supply Ability: 5000 pcs/ Month

Product Specification

- Standard Equipment: Laser Interferometer Stage
- Stage Travel: ≤105 Mm
- Image Resolution: ≤1nm@15kV; ≤1.5nm@1kV
- Beam Current Densit: >5300 A/cm2
- Minimum Beam Spot Size: ≤2 Nm
- Electron Beam Shutter: Rise Time < 100 Ns
- Highlight: **EBL electron beam lithography machine**, **electron beam lithography scanning microscope** , **OPTO-EDU A63.7010 lithography machine**

Product Description

OPTO-EDU (BEIJING) CO., LTD.
F-1501 Wanda Plaza, No.18 Shijingshan Road, Beijing 100043, China
Tel:+8610 88696020 Fax:+8610 88696085

A63.7010

EBL Electron Beam Lithography Machine

A63.7010 Specification

OPTO-EDU

Technical Features

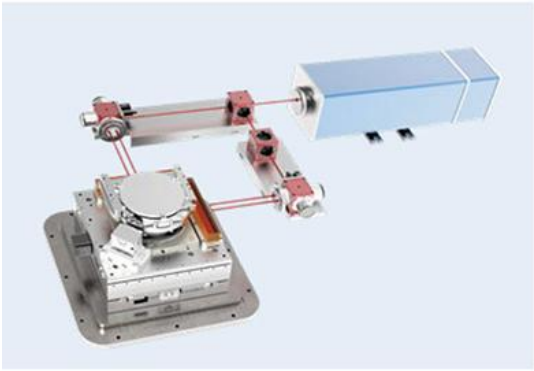
The A63.7010 electron beam lithography system(EBL) utilizes a field emission gun and is equipped with an integrated high-speed graphics generator to achieve high-speed, high-resolution lithography on semiconductor wafers. The system comes standard with a high-precision laser interferometer-based stage, allowing users to meet the demands of large-stroke, high-precision stitching and overlay. This system plays a significant role in the fields of new materials, cutting-edge physics research, semiconductors, microelectronics, photonics, and quantum research.

Stage Specifications	
Standard Equipment	Laser Interferometer Stage
Stage Travel	≤105 mm

Electron Gun and Imaging Specitications	
Schottky Field Emission Gun	Acceleration Voltage 2OV~ 30kVSide Secondary ElectronDetector and In-Lens Electron Detector
Image Resolution	≤1nm@15kV; ≤1.5nm@1kV
Beam Current Densit	>5300 A/cm2
Minimum Beam Spot Size	≤2 nm
Lithography Specitications	
Electron Beam Shutter	Rise Time < 100 ns
Writing Field	≤500x500 um
Minimum Single Exposure Line Width	10±2nm
Scan Speed	25 MHz/ 50 MHz
Graphics Generator Parameters	
Control Core	High-performance FPGA
Maximum Scan speed	50 MHz
D/A Resolution	20-bit
Supported Writing Field Sizes	10 um~500 um
Beam Shutter Suppor	5VTTL
Minimum Dwell Time Increment	10ns
Supported File Formats	GDSII, DXF, BMP, etc.
Faraday Cup Beam Current Measurement	Included
Proximity Effect Correction	Optional
Laser Interferometer Stage	Optional
Scan Modes	Sequential (Z-type), Serpentine (S-type), Spiral, and other vector scan modes
Exposure Modes	Supports field calibration, field stitching, overlay, and multi-layer automatic exposure
External Channel Support	supports electron beam scanning, stage movement, beam shutter controL, andsecondary electron detection

A63.7010 Product Features

OPTO-EDU



Laser Interferometer Stage

Laser Interferometer Stage: An advanced laser interferometer stage that meets the requirements for large-stroke, high-precision stitching and overlay

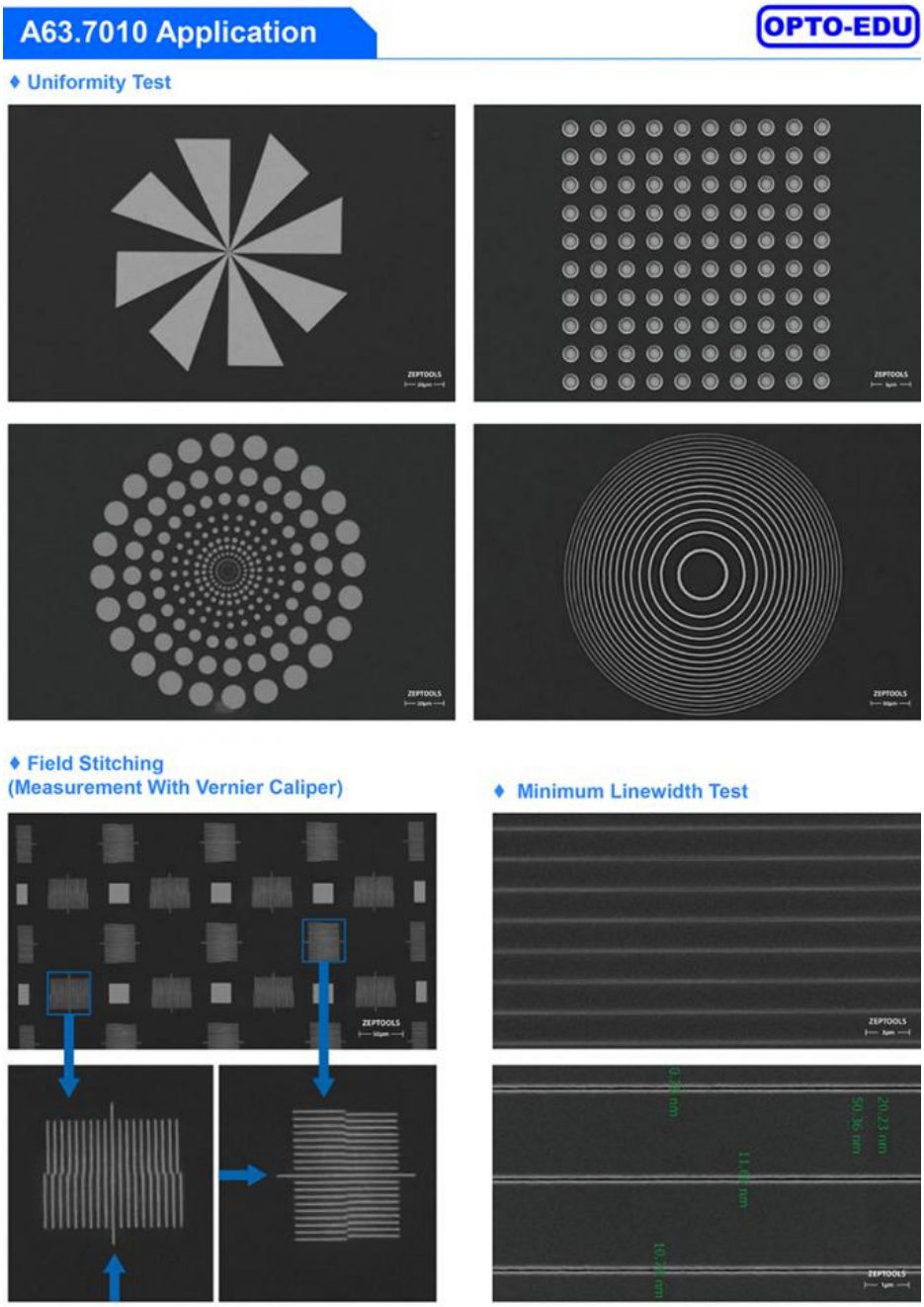
Field Emission Gun

A high-resolution field emission gun is an important guarantee for lithography quality

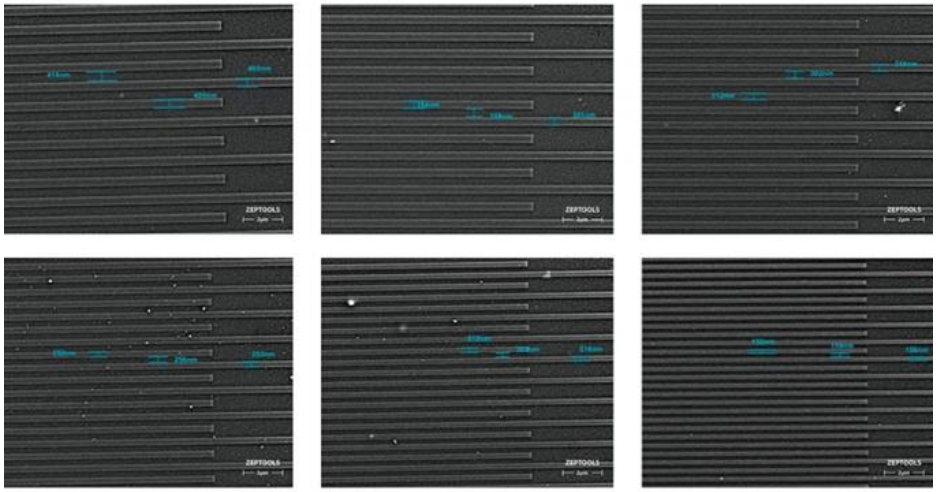
Graphics Generator

Achieves ultra-high resolution pattern drawing while ensuring ultra-high-speed scanning

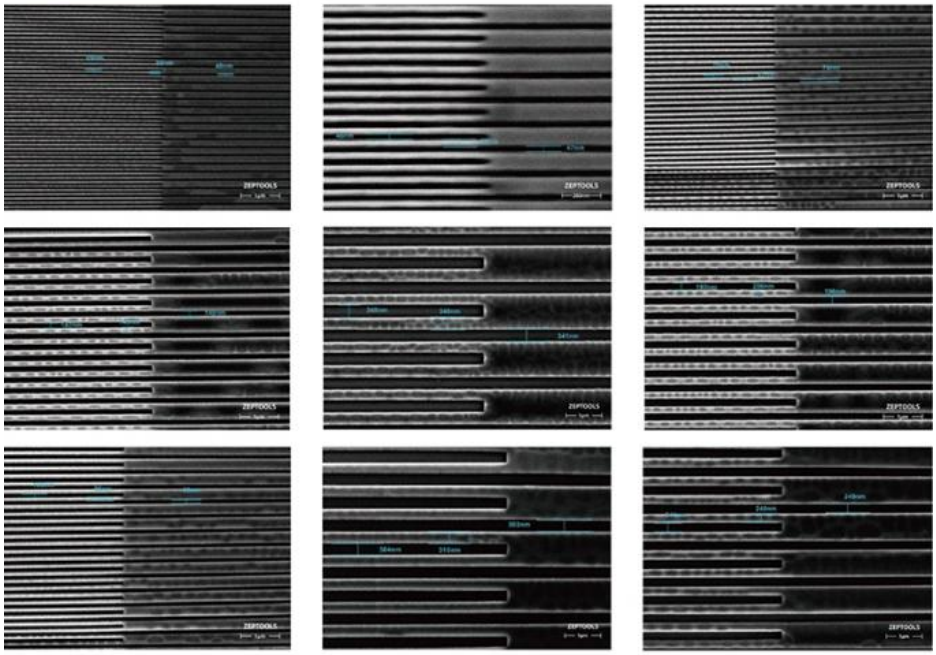
A63.7010 VS Raith 150 Two		
Device Model	OPTO-EDU A63.7010 (China)	Raith 150 Two (Germany)
Acceleration Voltage (kV)	30	30
Min. Beam SpotDiameter (nm)	2	1.6
Stage Size (inch)	4	4
Minimum Linewidth (nm)	10	8
Stitching Accuracy (nm)	50(35nm)	35
Overlay Accuracy (nm)	50(35nm)	35



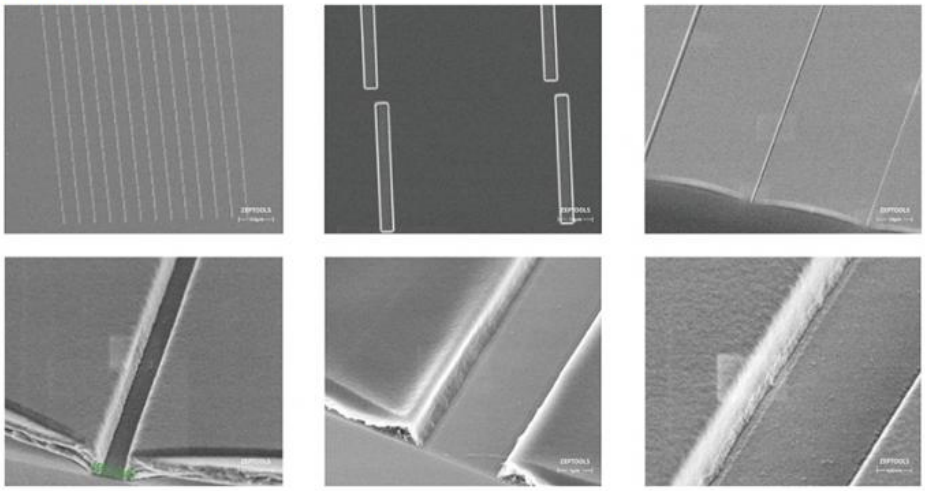
♦ HSQ Resist Test



♦ PMMA Resist Test

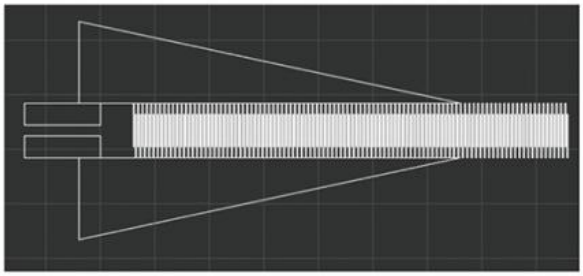


♦ Thick Resist Test

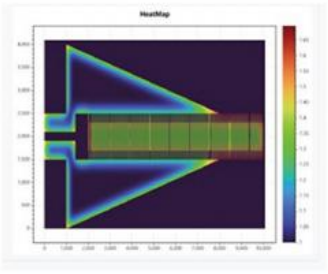


♦ Seamless Stitching Of Long Gratings

♦ Proximity Effect Correction ● Dose Correction Effect

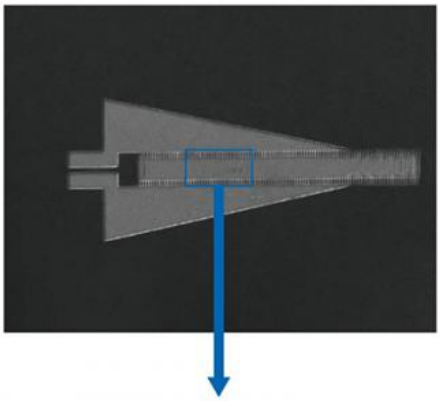


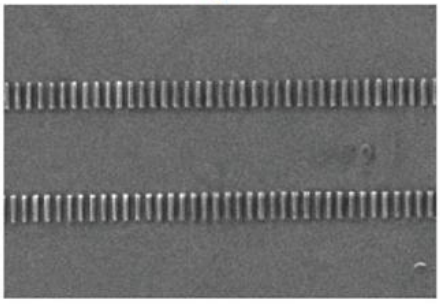
Design Model (The Width Of The Groove Is 200 nm)



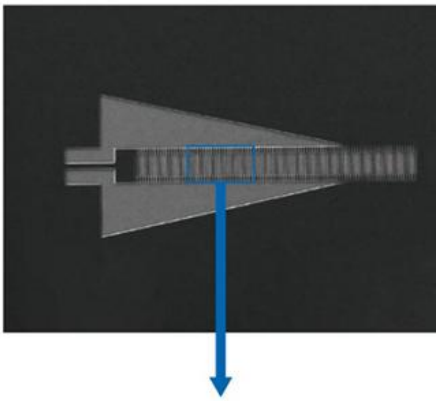
Dosage Correction Results

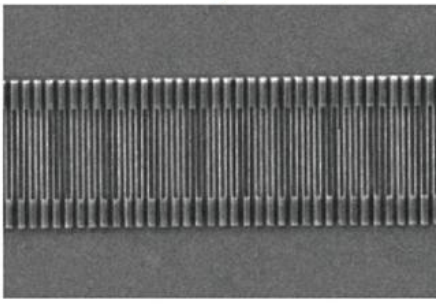
♦ Comparison Before And After Dosage Correction





Exposure Results Without Dosage Correction





Exposure Results With Dosage Correction

Opto-Edu (Beijing) Co., Ltd.

0086 13911110627 sale@optoedu.com cnoec.com

F-1501 Wanda Plaza, No. 18 Shijingshan Road, Beijing 100043, China