

NXQ4008 Mask Aligner

- The NXQ4008 Mask Aligner combines innovative design with precision alignment and exposure features.
- The versatility of the NXQ4008 has made it the choice of manufacturing facilities, R&D Centers and university programs around the world, for a wide range of technologies.
- It supports both vacuum and contact printing and will process partial and whole substrates up to 200mm (8") diameter.

Microelectronics

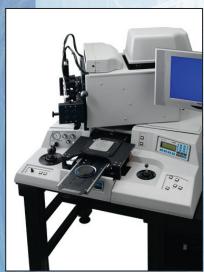
MEMS

LED

MicroFluidics

WLP





Q4008 Mask Aligner

Optical head swivels to allow mask loading and easy access to work area. Trayload feature allows direct loading of substrates onto the wafer chuck.

NXQ4006 MASK ALIGNER

Features

- Substrate sizes from 5mm pieces to 150mm (6") diameter
- Manual X-Y joystick and micrometer theta alignment stage
- ScanStage This unique feature allows you to move the entire mask holder and wafer stage an additional +/- 16mm in X-Y under the objectives for increased viewing area.
- Z Axis Frictionless air bearing highly reliable and maintenance free
- Easy manual tray-load for substrate loading / unloading
- Automatic Wedge Error Compensation and movement to Align Gap after loading wafer
- Soft, Pressure and Vacuum contact exposure modes
- VideoView CCTV splitfield/ singlefield Video microscope, Infinity Corrected 5x Objectives for the best possible depth of focus, 7x Optical Zoom (select desired field of view and magnification)
 - o Optional Objectives 2x, 10x or 20x
- · Simple topside mask loading
- UltraSense constant power or constant intensity UV power supply
- Integration and UV Collimation lens for improved printing resolution
- Vibration Isolation table included as standard
- Easy operation- ideal for multi-user labs
- Extremely reliable, low maintenance and low cost of ownership
- Large Gap Alignment

Options

- Infrared (IR) backside alignment (BSA)
- · Optical backside alignment
- NUV Hg (280-350nm) / MID UV (280-450nm) / DUV Hg-Xe (220-280nm) exposure optics
- Quadcam 2 High Resolution CCD Cameras per objective – This unique feature allows you to switch between Wide View and High Magnification at the touch of a button without refocusing!
- · Manual micrometer for X-Y alignment
- MagnaView (optical) splitfield / singlefield microscope
 - o CCTV option for MagnaView microscope
 - o Objectives 2x, 5x, 10x or 20x
 - o Eyepieces 10x or 15x
- · Pulsed exposure timer sequencing

Applications

- Microelectronics
- MEMS
- LED
- MicroFluidics
- WLP

Performance

Print Modes Soft, Pressure or Vacuum Contact modes

Print Resolution = / >0.6 microns* (with vacuum contact-)

Substrate size from pieces 5mm sq, up to 150mm

Round or Square

Mask Size 2"x2" up to 9"x9" (2"x2" requires mask adaptor)

Alignment Stage

Alignment Travel X-Y Manual JoystickAlignment Travel Theta Manual Micrometer

Stage Scan +/- 16mm
X-Y Movement +/- 3.8mm
Theta Rotation Range +/- 7 degrees
Mask/ Wafer separation 0 - 180 microns
Mask Size 2.5"x2.5" up to 7"x7"

Topside Alignment overlay*
 Bottomside Alignment Overlay*
 2 microns

* Operator/ process dependant

Video View Microscope Travel Range (not including Scan Stage)

UV Lamphouse/UV Exposure Optics

UV Lamphouse
 Exposure Optics
 UV (350-450nm) standard
 NUV (280-350nm) Optional
 MID UV (280-450nm) Optional
 DUV (220-280nm) Optional

• UV Uniformity +/- 3%, 4" diameter field +/- 4%, 6" diameter field

Electronics

Programming & Control
 PLC with LCD Display.
 Intuitive operator Interface for menu driven operation

System Requirements

Voltage 110VAC/60 Hz or 240VAC/50Hz
 Compressed Air 5.4 bar (80 PSI)
 Vacuum -0.7 bar (21" Hg)
 Nitrogen (or CDA) 3 bar (40 PSI)

System / Module Data

W x D x H ~1220mm x 915mm x 1423mm (48"x36"x56")
 Weight 217Kg (480 Lb)

^{*}Specifications subject to change.