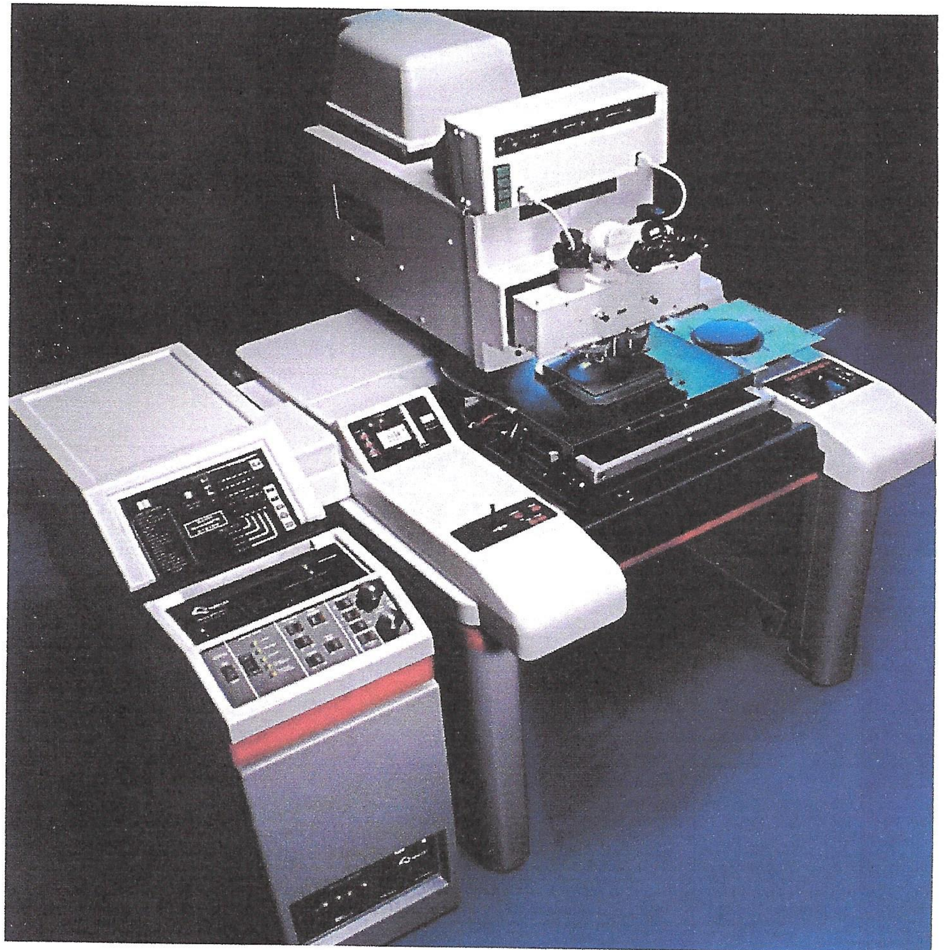
Ultra µ line Series

Ultra µ line 7000 Series High Resolution Mask Aligners

Features

- Four print mode capability.
- Exclusive QL-19/15 (all quartz) lenticular U.V. exposure system for ultimate performance in uniformity and intensity.
- Zeiss/Quintel viewing optics 20x - 400x splitfield and singlefield alternate viewing.
- Precision "Micro-Slide" dual range motorized stage with pre-loaded X, Y & Ø motions and automatic stage re-centering after exposure.
- Quintel "Zero-Shift" air-bearing guideset with setable automatic wafer/mask separation control.
- Full-Time diagnostic system with logic sequence display.
- Low maintenance factor - all movements preloaded to eliminate hysteresis and routine adjustments. Precision components throughout.
- Low cost of ownership.
- Two stage shock-isolation table featuring special vibration dampen leveling pads and final isolation between main frame structure and stress-relieved base plate.



THE NEW *Ultra µ line 7000* SERIES MASK ALIGNMENT SYSTEM BY *QUINTEL* CORPORATION INCORPORATES STATE-OF-THE-ART TECHNOLOGY AND DESIGN FEATURES NOT FOUND IN ANY OTHER CONTACT/PROXIMITY TYPE PHOTOLITHOGRAPHY PRINTER. THE *Ultra µ line 7000* IS IDEALLY SUITED FOR MANY WAFER OR SUBSTRATE TYPE MATERIALS SUCH AS: SILICON, GaAs, SILICA, SAPPHIRE, AND MANY OTHERS RANGING UP TO 8 INCH DIAMETER*.

THE *Ultra µ line 7000* TECHNOLOGY IS NOW BEING SUCCESSFULLY USED IN THE MANUFACTURING OF SEMICONDUCTORS, FLAT PANEL DISPLAYS, DIFFRACTIVE OPTICS, MEMS, BUMP DEVICES, POWER DEVICES, MULTICHIP MODULES, THIN FILM AND THICK FILM PRODUCTS.

THE *Ultra µ line 7000* UNIQUE FEATURES PROVIDE OPTIMUM PROCESS CONTROL WHILE INSURING REPEATIBILITY WITH MAXIMUM UP-TIME AND SIMPLICITY OF OPERATION.

* For larger wafer/substrate capability contact Quintel direct.

Offering Practical Solutions to Photolithography Applications

Ultra μ line 7000 Series

Optional Features

- **AutoLoad:**

  The ***Ultra μ line 7000*** Series mask alignment system offers (optional) a fully automatic robotic substrate loading/unloading system with integral automatic optical prealign capability.

- **CIT/Ultra-High Resolution Exposure System:**

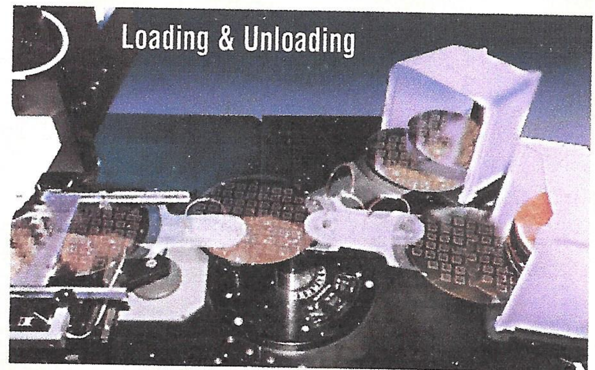
  The ***QUINTEL*** coherent image transfer light source and projection lens module offers superior CD control with sub micron resolution.

- **Video Based Splitfield Microscope W/Monitor:**

  Magnification - Optical 2.5x - 45x range.
  Monitor - 102x - 1845x range
  Zoom Feature - .5x - 2.25x range
  Monitor - 13" Black/White or Color
  - 600 Lines resolution
  Image Burn in (after image) - None

- **I.R. Ilumination System:**

  Fully adjustable infrared illumination system for backside alignment capability.



Aligner Specifications

Substrate Size:
Wafer - Up to 8" diameter
Substrate - Up to 7" x 7"
(Larger sizes can be accommodated - Contact Quintel direct).

Mask Size:
Up to & including 9" x 9" x .250"
Rotation Adjustment - ±10°

Exposure Modes:
Pressure "Soft" Contact, Vacuum Contact, Mask Deflection Contact, & Proximity (Non Contact)

Exposure System:
Power - 200/350/500/1000 Watt Hg Lamps
U.V. - 350 nm to 450 nm
N.U.V. - 280 nm to 350 nm
D.U.V. - 240 nm to 280 nm
Uniformity - ±2% (6") ±5% (8")

Alignment Range:
X-Y Movement - ±4mm
Ø Movement - ±7°
Scan Movement - ±19mm

Microscope:
Zeiss/Quintel optics - splitfield & singlefield systems
Magnification - Splitfield (100x - 380x) /singlefield (40x-150x) range
Objective Spacing - 25mm - 120mm

Unit Size:
Manual - 47"W x 47"H x 33"D
Weight - 550 Lbs.
Autoload - 70"W x 47"H x 33"D
Weight - 750 Lbs. (Approx.)

Utilities:
Clean Dry Air (90 - 100 psig)
Nitrogen Purge (60 psig)
Vacuum (20-23 inch Hg)
110-120 VAC (15 amp)

Special Applications

Custom Engineering:

Custom design application of alignment and imaging systems available thru **QUINTEL'S** engineering department.
Consult **QUINTEL**

2431 Zanker Rd. at Component Dr. • San Jose, CA 95131
(408) 435-1995 • Fax (408) 435-8120