

*“Working together, we can cross any boundary”*

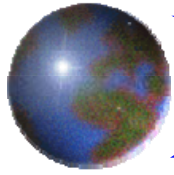
A photograph of the Golden Gate Bridge in San Francisco, California, viewed from the water. The bridge's iconic red-orange towers and suspension cables are prominent against a clear blue sky. In the foreground, the dark blue water of the bay is visible, with a large rock in the lower center. To the left, a large, multi-story building is partially visible. The overall scene is bright and clear.

*NXQ Corporate  
Overview*



# *NXQ - History*

- Founded in 1989, *Neutronix* has become widely recognized as the premier supplier of both remanufactured and re-engineered Canon photolithography systems.
- Since 1978, *Quintel* has been a supplier of mask alignment systems for the semiconductor and microelectronics industry. Quintel has evolved and expanded its product offerings to become a leading provider of new tools for the Opto-electronic, Microsystems and Nanotechnology markets.
- 2005, *Neutronix* merges with *Quintel*, forming *Neutronix-Quintel*.



# *NXQ - Headquarters*

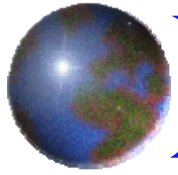


## Main Headquarters

985A Jarvis Dr. Morgan Hill, CA  
95037

PH: 1-408-776-5190 FAX 1-  
408-776-1039

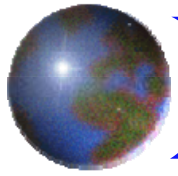
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# *NXQ - Factory*



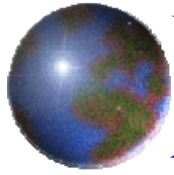
**NXQ owns its building, a state of the art, 35,000 square foot facility with a class 10,000 clean room specifically configured for customer applications**



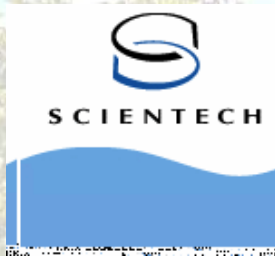
# *NXQ - Factory*



With over 200 man years of experience in photolithography systems, semiconductor applications and custom manufacturing, NXQ is your choice partner for your most critical processing needs



# *NXQ Representatives*



## ASIA

### **China and Taiwan**

#### **Scientech**

11F, No. 208, Rui-Kuang Rd

Taipei, Taiwan

PH: [886] 3 516-5177 FAX [886] 2 8751-2020

W: <http://www.scientech.com.tw/info.html>

E: [info@scientech.com.tw](mailto:info@scientech.com.tw)

### **Singapore, Thailand, Malaysia, Philippines, Indonesia**

#### **Advanti Technology, div Scientech**

Block 5000 Ang Mo Kio Ave 5, #04-12

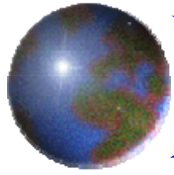
Techplace II – Singapore 569870

PH: [65] 6483-3303 FAX [65] 6483-3313

W: <http://www.scientech.com.tw/info.html>

E: [sales@advantititech.com](mailto:sales@advantititech.com)





# *NXQ Representatives*



## ASIA

### **Vietnam**

#### **Acrosemi**

18 To Hien Thanh

Hai Ba Trung District

Hanoi City

PH: [84] 91-225-7173 FAX [84] 04-278-0057

W: <http://www.acrosemi.com/>

E: [info@acrosemi.com](mailto:info@acrosemi.com)



### **Korea**

#### **PTL**

169-32 Sa Dang-Dong

Dong Jak-ku, South Korea

PH: [82] 31-621-1110 FAX [82]

W: <http://www.?????>

E: [info@PTL.com](mailto:info@PTL.com)



### **Japan**

#### **Litho Tech**

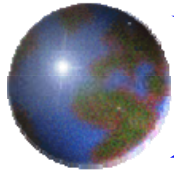
2-6-6-201, Namiki

Kawaguchi, Saitama 332-0034

PH: [81] 48-258-6775 FAX [81] 48 258 6673

W: <http://www.ltj.co.jp/>

E: [sminami@ltj.co.jp](mailto:sminami@ltj.co.jp)



# *NXQ Representatives*



## **India**

### **OM Scientific**

Jassate, C-20/1

Science & Technology Entrepreneurs Park  
Sector-62, Noida-201301

Uttar Pradesh, India

PH: [91] 99 10375235

E: [info.india@omscientific.com](mailto:info.india@omscientific.com)

W: <http://www.omscientific.com/>



## **Turkey**

### **Teknis Teknologik**

Suslu Sok.No: 16/2

Mebusevleri Tandogan

Ankara, Turkey

PH: [90] 312 2120717 FAX [90] 312 2154364

E: [nedim@teknis.com.tr](mailto:nedim@teknis.com.tr)



**M.M.R.C. Pty Ltd**

for Micro Materials & Research Consumables

## **Australia**

### **MMRC**

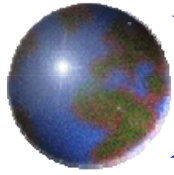
Suite 124, 19 - 29 Milton Pde

Malvern, Vic, 3144 Australia

PH: [61] 3 9885 1752 FAX [61] 9885 2603

W: <http://www.mmrc.com.au>

E: [mail@mmrc.com.au](mailto:mail@mmrc.com.au)



# *NXQ Representatives*



## Europe

### **United Kingdom**

#### **Sistem Technology**

8 Stocks Hill

Silverstone, Towcester

Northhamptonshire

Great Britian

PH: [44] 1327 857006 FAX [44] 1327 858133

E: [info@sistemtechnology.com](mailto:info@sistemtechnology.com)

W: <http://www.sistemtechnology.com>

### **France, Spain, Portugal, Belgium, Morocco**

#### **HEGM Technology**

14 lieu dit Montplaisir

37460 Beumont Village

France

PH: [33] 6 70 82 14 69 FAX [33] 2 47 92 68 67

E: [sdunin@orange.fr](mailto:sdunin@orange.fr)

### **Italy**

#### **MCUsrl**

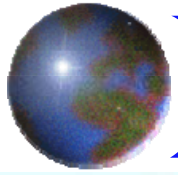
Via Casati 14

20052 Monza (Milano)

Italy

PH: [39] 039-322351 FAX [39] 039-322351

E: [MCUsrl@mcusrl.com](mailto:MCUsrl@mcusrl.com)



# *NXQ Representatives*

## Europe

### **Russia**

#### **El-Tech SPb**

Finlyandskaya Str., 27

Kolpino, Saint-Petersburg, 196650

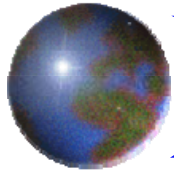
Russian Federation

PH / FAX : [7] 812 322 85 85

E: [k@eltech-spb.ru](mailto:k@eltech-spb.ru)

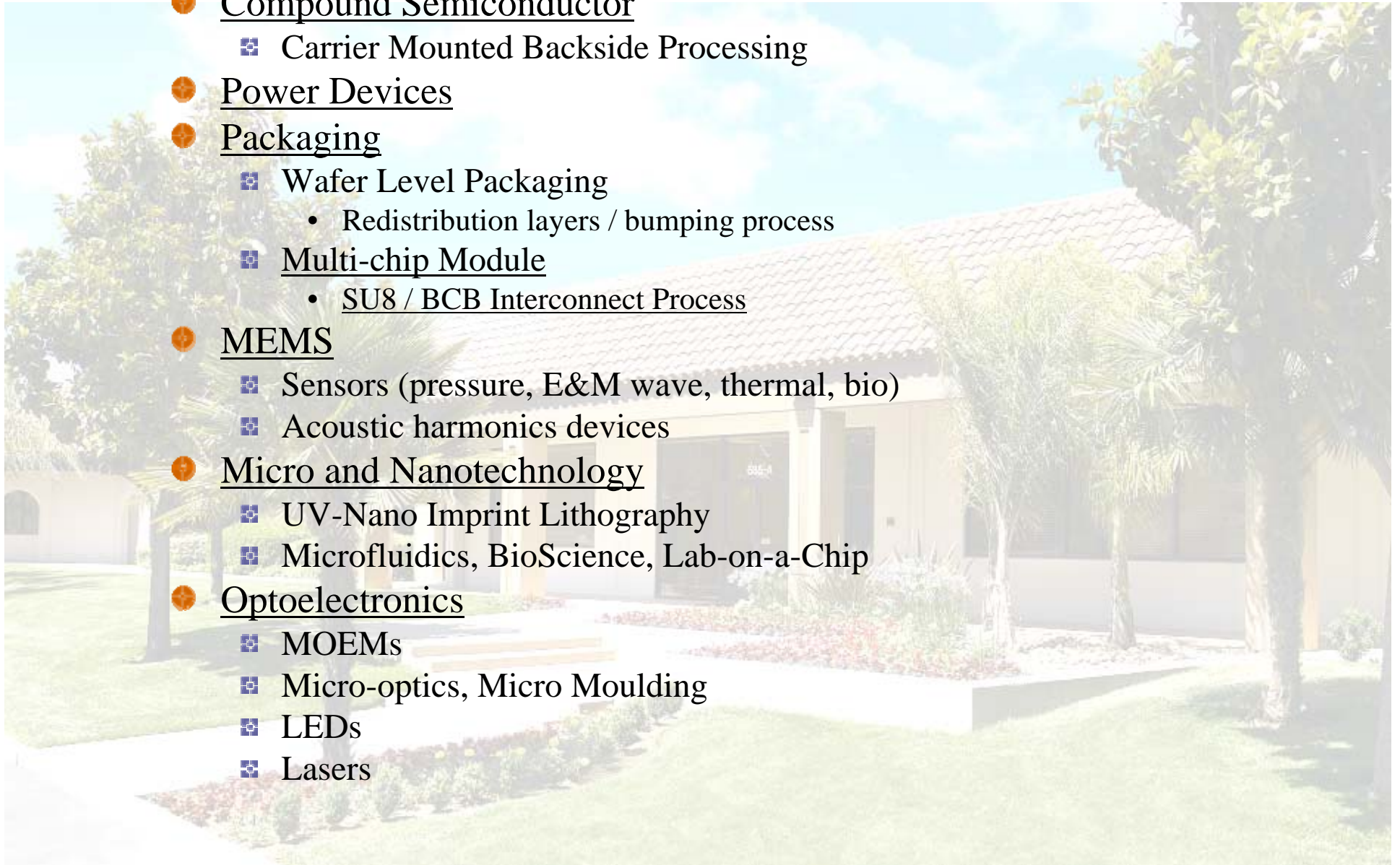
W: <http://www.eltech-spb.ru>

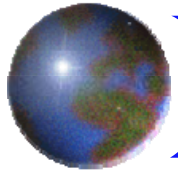




# *NQX Markets / Applications*

- Compound Semiconductor
  - ❖ Carrier Mounted Backside Processing
- Power Devices
- Packaging
  - ❖ Wafer Level Packaging
    - Redistribution layers / bumping process
  - ❖ Multi-chip Module
    - SU8 / BCB Interconnect Process
- MEMS
  - ❖ Sensors (pressure, E&M wave, thermal, bio)
  - ❖ Acoustic harmonics devices
- Micro and Nanotechnology
  - ❖ UV-Nano Imprint Lithography
  - ❖ Microfluidics, BioScience, Lab-on-a-Chip
- Optoelectronics
  - ❖ MOEMs
  - ❖ Micro-optics, Micro Moulding
  - ❖ LEDs
  - ❖ Lasers





# *NXQ Customers*

*NXQ has an install base of over 700 machines worldwide. Unlike our competitors, NXQ still supports machines over 25 years old and customer needs whether or not they own NXQ equipment. Our philosophy and commitment to customers for the long term has never changed.*

- Lockheed Martin

- IC

- LG Innotek

- Sensors (pressure, E&M wave, thermal, bio)

- Kumamoto Techno

- DNA Assay

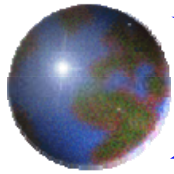
- Philips

- LEDs

- High Brightness LEDs

- University of Queensland

- Nano imprinting



# NXQ Customers

*The NXQ 7500/8000 has an install base of over 40 machines. The system's advanced features coupled with its modularity make it a winning combination from product development to high volume production.*

- Compound Semiconductor

- Lockheed Martin
- LG Innotek

- MEMS

- Micro2Nano (M2N)

Sensors

- Nanotechnology

- Mass General Hospital
- University of Queensland

Microfluidics

Nano-imprinting (bio)

- Optoelectronics

- JDSU
- Philips Lumileds

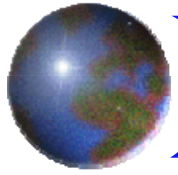
Laser

LEDs

- Research

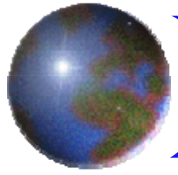
- Oakridge National Labs

Classified Research



# Testimonials

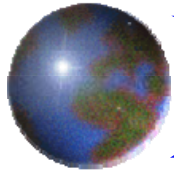
- *"The 7500 has been a real workhorse; we've had high yields, no breakage, no 'run out' issue, the alignments are great and we're looking forward to a new product ramp up using the system"*
  - Don Hoffman, Process Engineer, JDSU
- *"When we purchased it, the Quintel equipment seemed to have the best combination of product features and cost performance for our needs, and we have been very happy with the technical support."*
  - Janice K. Mahon, Vice President Technology Commercialization, UDC
- *"We considered other suppliers like Karl Suss, Electronic Visions Group and Kasper, but we felt that the remanufactured Canon machines from Neutronix were the best value,". "We're very happy with Neutronix and we continue to buy their equipment. It's easy for the operators to use. It is well supported. Overall, it's a good low cost option."*
  - Martin Dewey, R&D Department, Systron Donner.



# *NXQ Customer Support*

*The NXQ philosophy of total customer support is reflected in its long term commitment in parts, service and applications engineering.*

- NXQ maintains an inventory of over \$900,000 in parts for all Quintel and Canon systems.
- Global International Depot Centers – Fast delivery of critical components
- Application Support: Process Engineering, Yield Improvement and Optimization
- 24/7 Customer Care Call Center / Email Notification Alert System for Quick Response & Support
- Maintain a strategic inventory supply of spare parts, consumables and PM Kit modules



# NXQ 7500



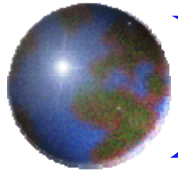
## *Model 7500 aligner System*



Auto handling system

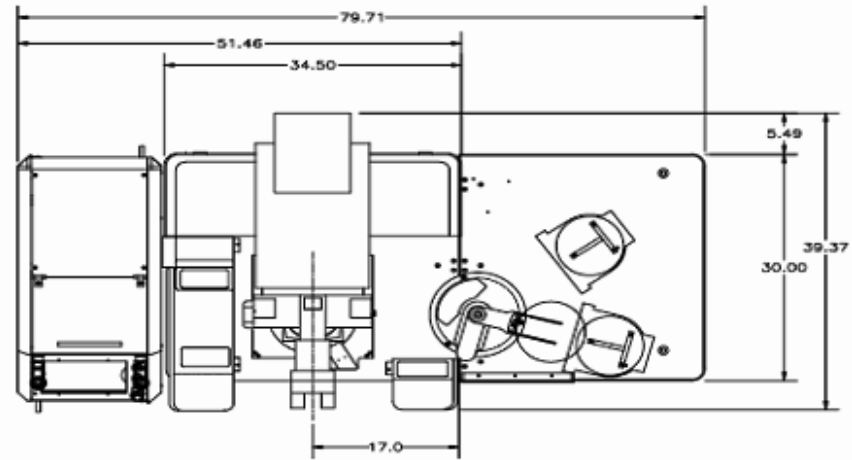


Manual IR system

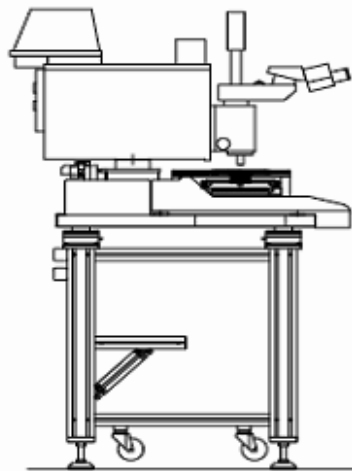


# *NXQ 7500 Footprint*

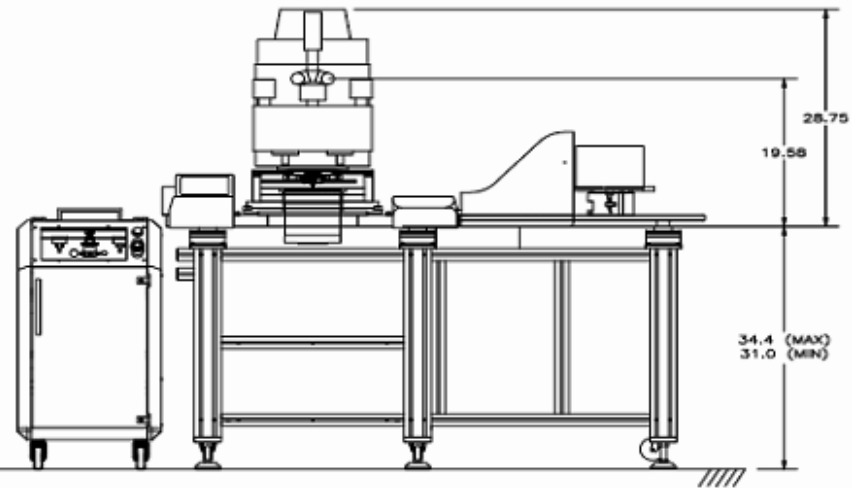
## INSTALLATION FOOTPRINT



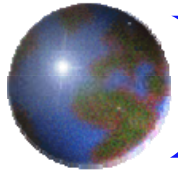
TOP VIEW



LEFT SIDE VIEW



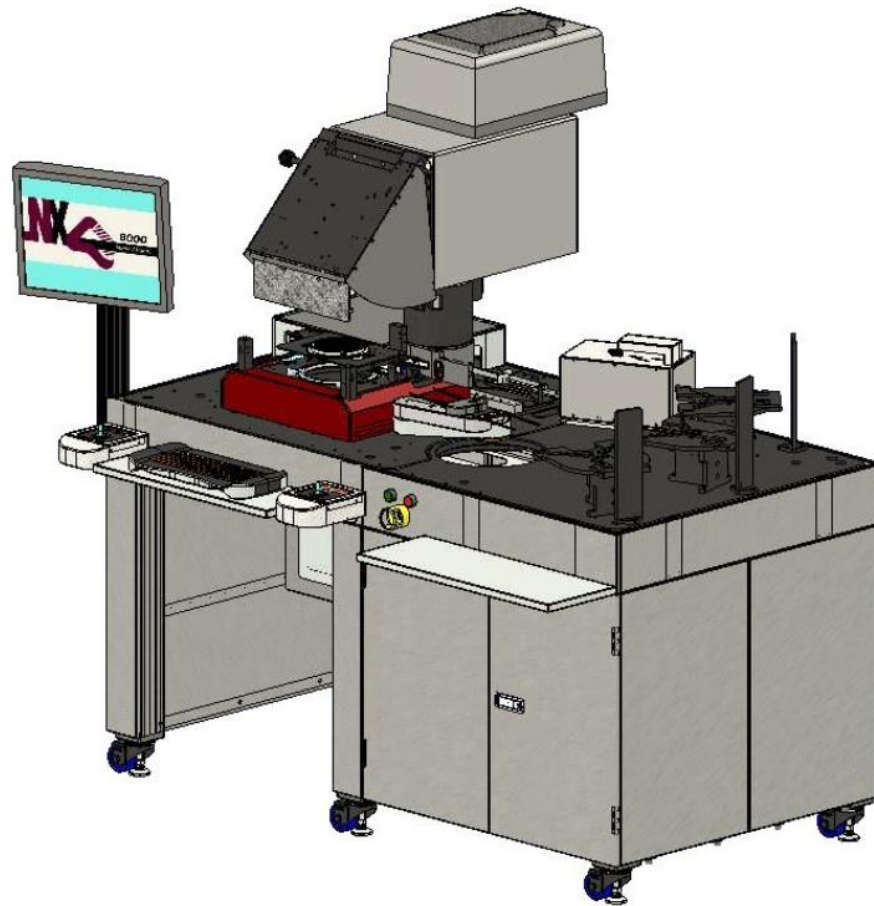
FRONT VIEW

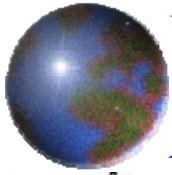


*NXQ 8000*

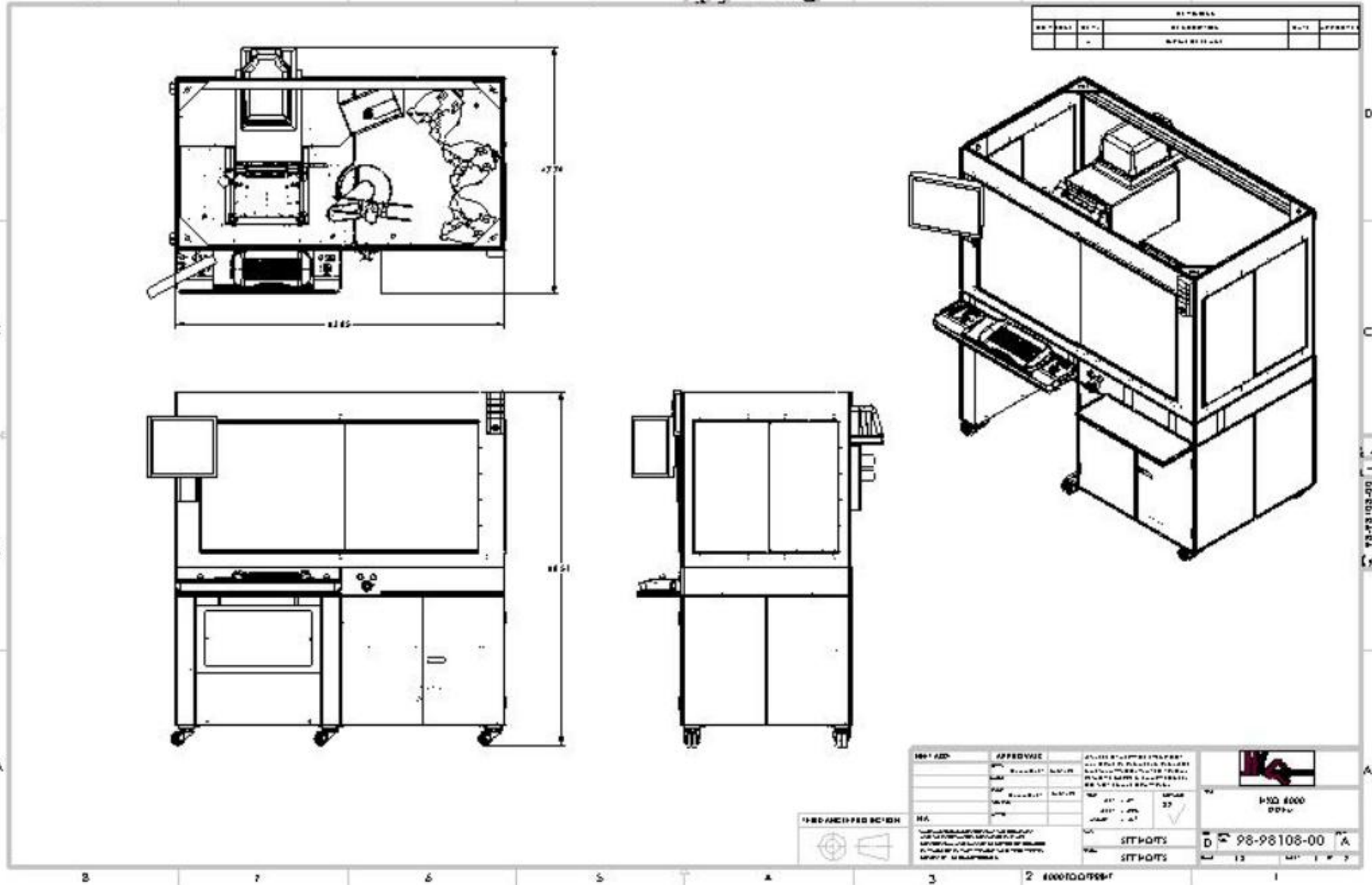


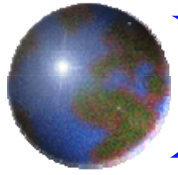
*Model 8000 aligner System*





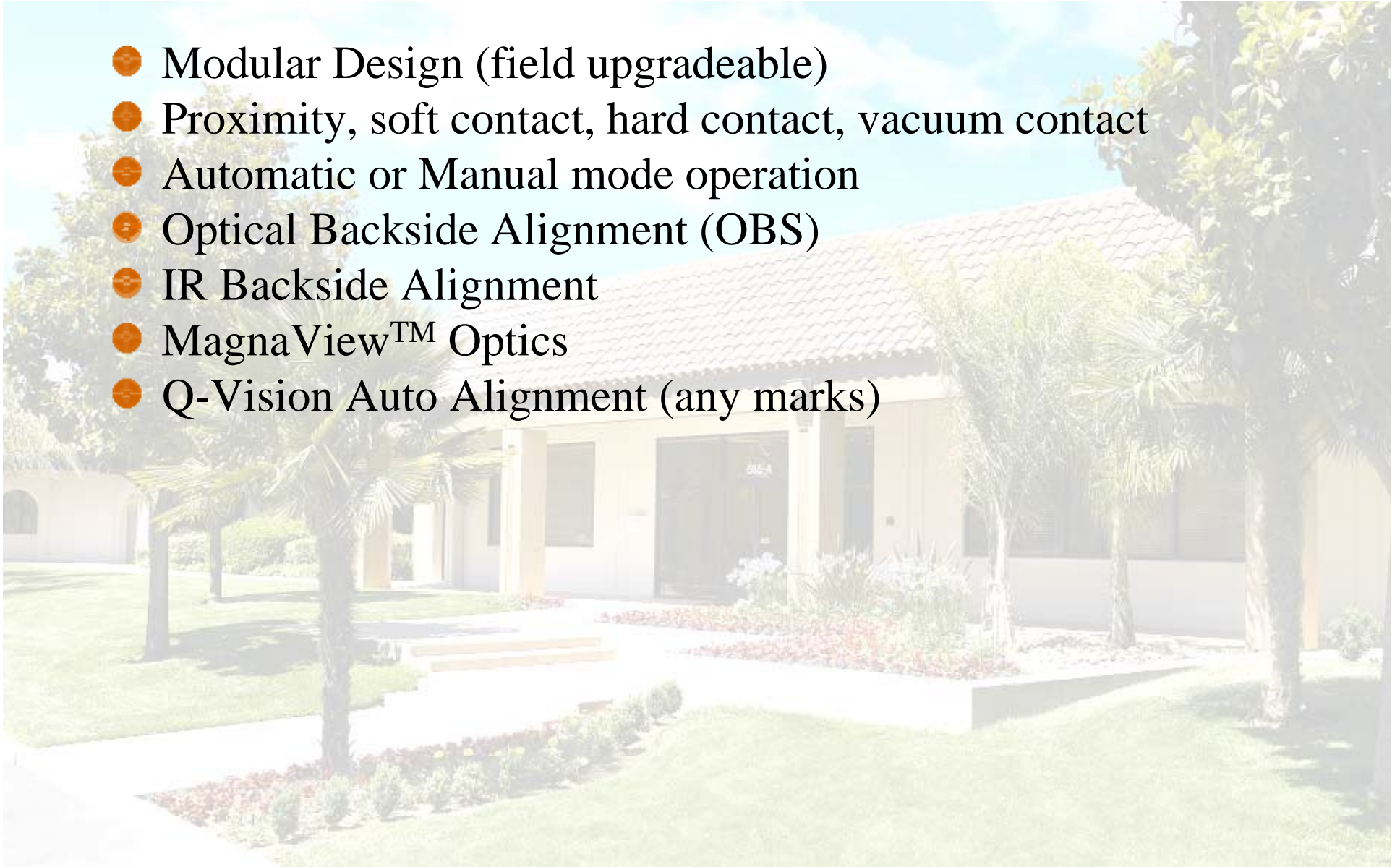
# NXQ 8000 Footprint

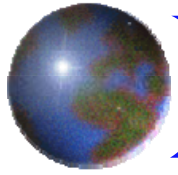




# 7500 / 8000 *Features*

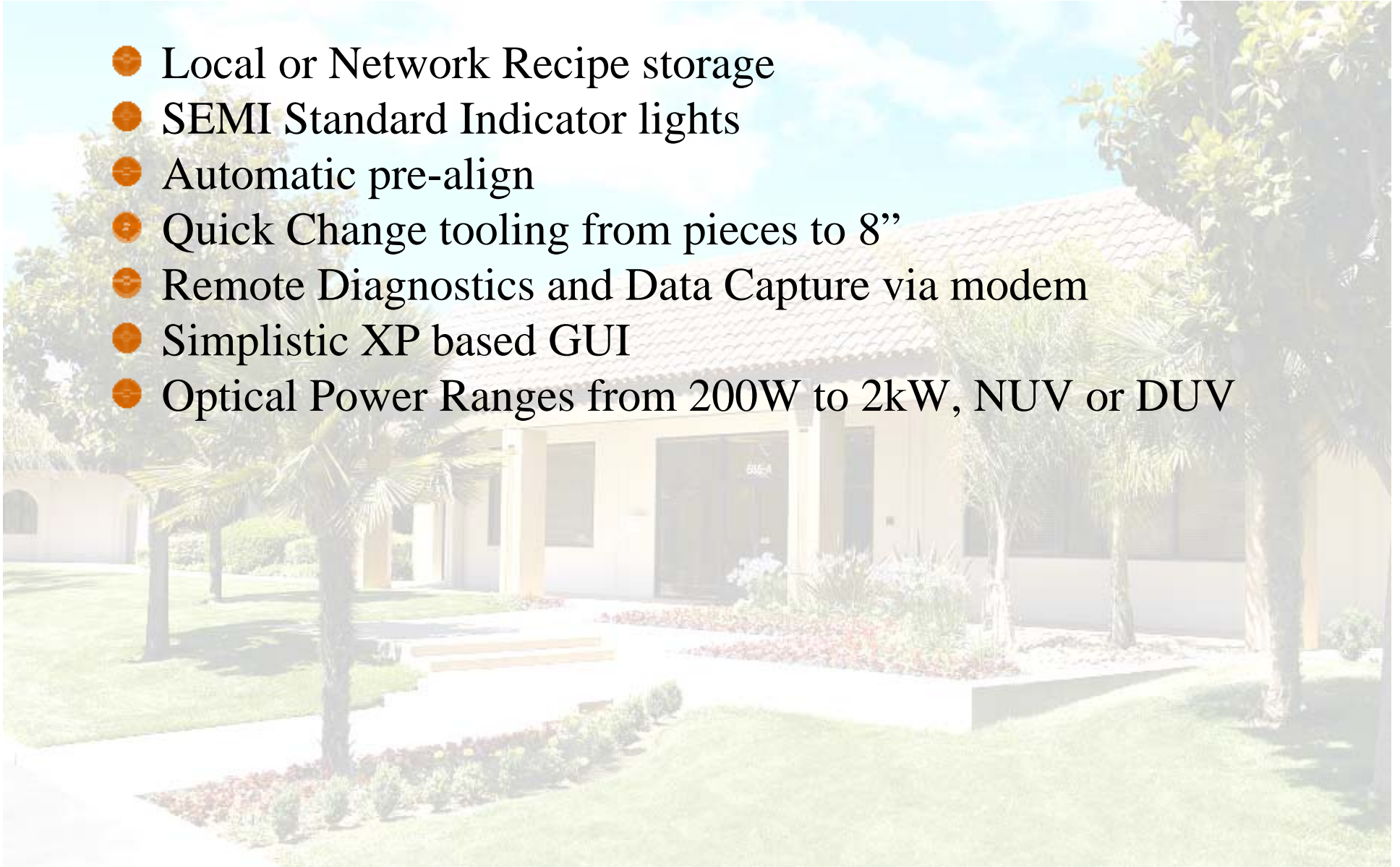
- Modular Design (field upgradeable)
- Proximity, soft contact, hard contact, vacuum contact
- Automatic or Manual mode operation
- Optical Backside Alignment (OBS)
- IR Backside Alignment
- MagnaView™ Optics
- Q-Vision Auto Alignment (any marks)

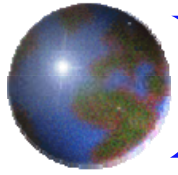




# 7500 / 8000 *Features*

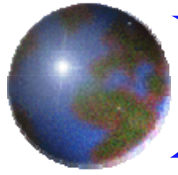
- Local or Network Recipe storage
- SEMI Standard Indicator lights
- Automatic pre-align
- Quick Change tooling from pieces to 8”
- Remote Diagnostics and Data Capture via modem
- Simplistic XP based GUI
- Optical Power Ranges from 200W to 2kW, NUV or DUV





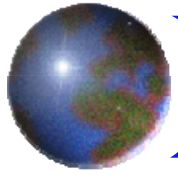
# 7500 / 8000 Specifications

- **Print Modes**
  - Soft, Pressure, Vacuum contact and proximity modes
- **Print Resolution** <1.0 microns (best 0.5 micron)  
(vacuum; process dependent)
- **Substrate size** pieces, up to 200mm
- **Alignment Stage** Motorized X-Y, auto re-centering
- **Alignment Travel Theta** Motorized with auto re-centering
- **Stage Scan** +/- 38 mm Y, +/-25mm X
- **X-Y Movement** +/- 4mm
- **Theta Rotation Range** +/- 7 degrees
- **Mask/Wafer separation** 0 – 1000 microns
- **Mask Size** 2.5x2.5” up to 9x9”
- **Top Alignment overlay** < 0.5 microns



# 7500/8000 Specifications

- **Bottom Alignment Overlay** 1 micron
- **Electronics**
  - Programming & Control PC based
  - Intuitive operator Interface menu driven operation
- **UV Lamphouse/ UV Exposure Optics**
  - UV Lamphouse 200/350W, 350/500W or 500/1KW
  - Exposure Optics UV (350-450 nm) standard
  - Exposure Optics NUV (280-350 nm) Optional
  - Exposure Optics DUV (220-280 nm) Optional
- **UV Uniformity**
  - +/- 3%, 150mm dia.
  - +/- 4% 200mm dia.



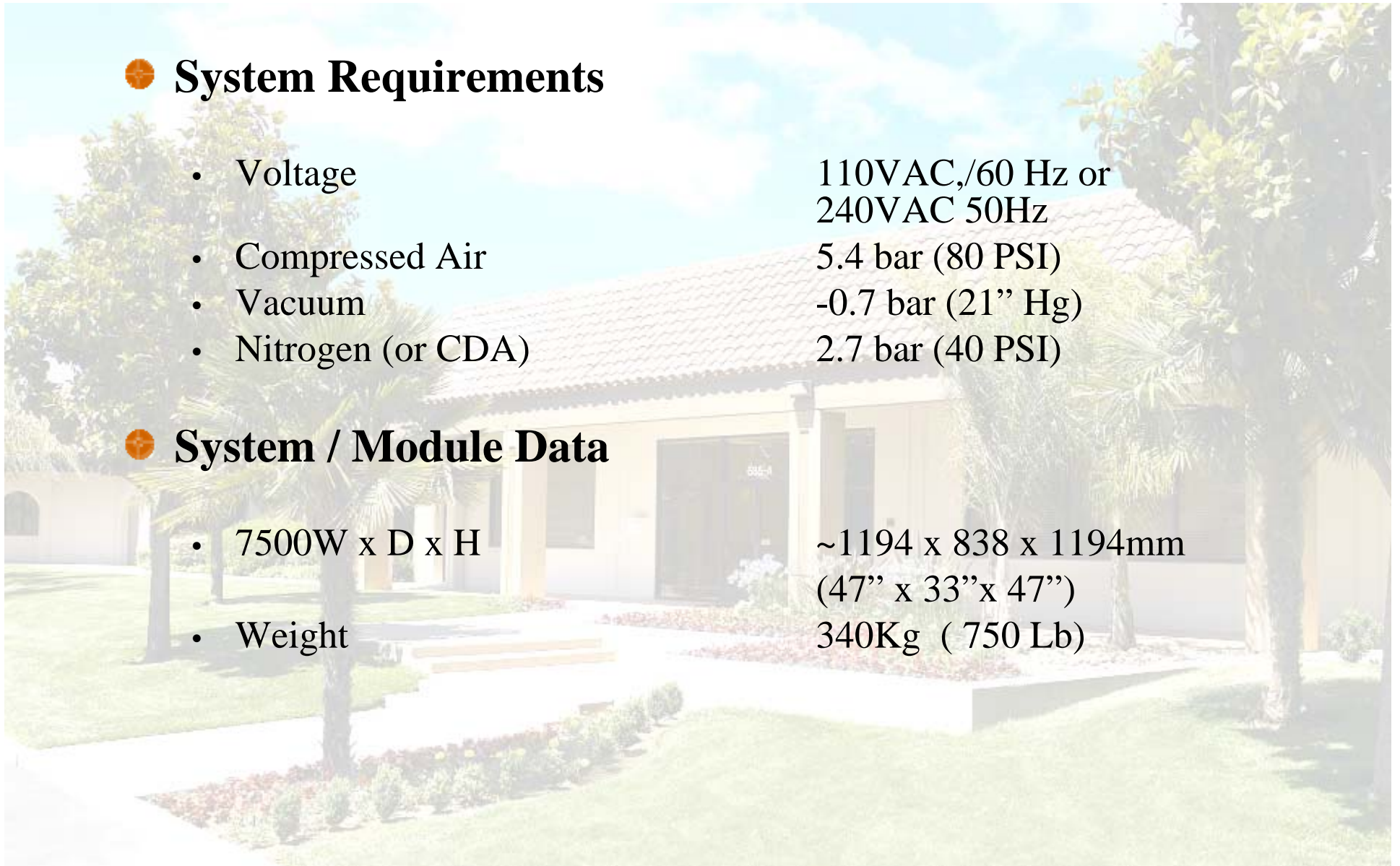
# 7500/8000 Specifications

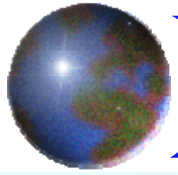
## ● System Requirements

- Voltage 110VAC, /60 Hz or 240VAC 50Hz
- Compressed Air 5.4 bar (80 PSI)
- Vacuum -0.7 bar (21" Hg)
- Nitrogen (or CDA) 2.7 bar (40 PSI)

## ● System / Module Data

- 7500W x D x H ~1194 x 838 x 1194mm  
(47" x 33" x 47")
- Weight 340Kg ( 750 Lb)





# *NXQ 4000 Series*



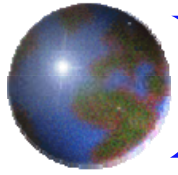
## *Model 4000-4 and 4000-6 aligner System*



4000-4 single field system

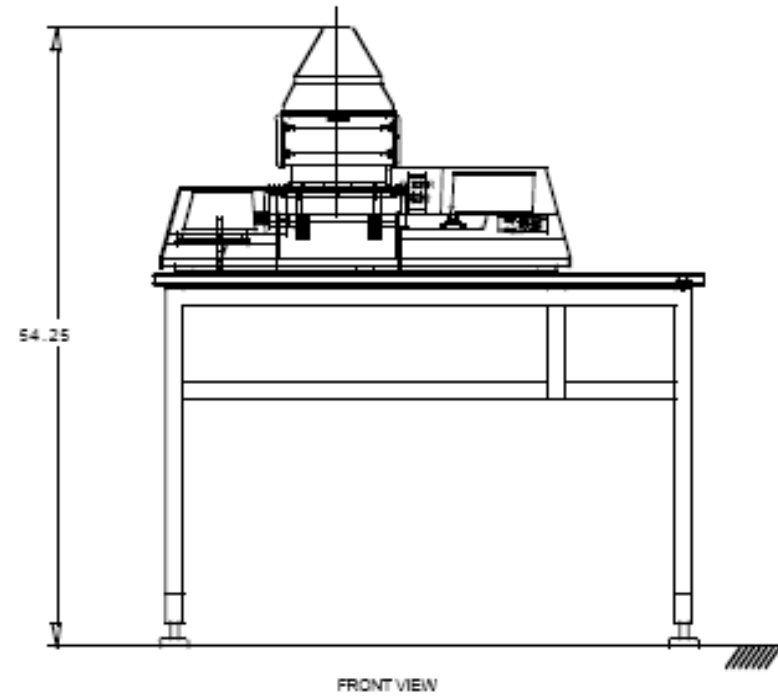
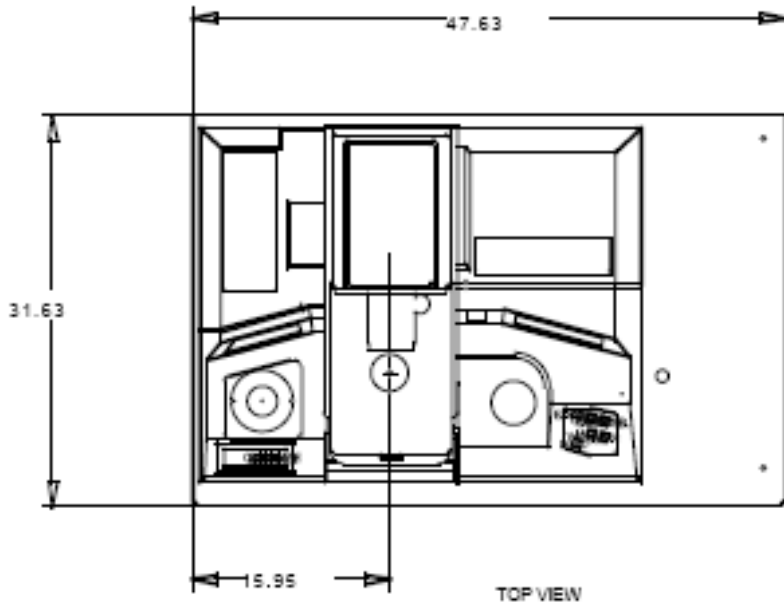


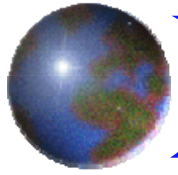
4000-6 split field system



# *NXQ 4000 Series*

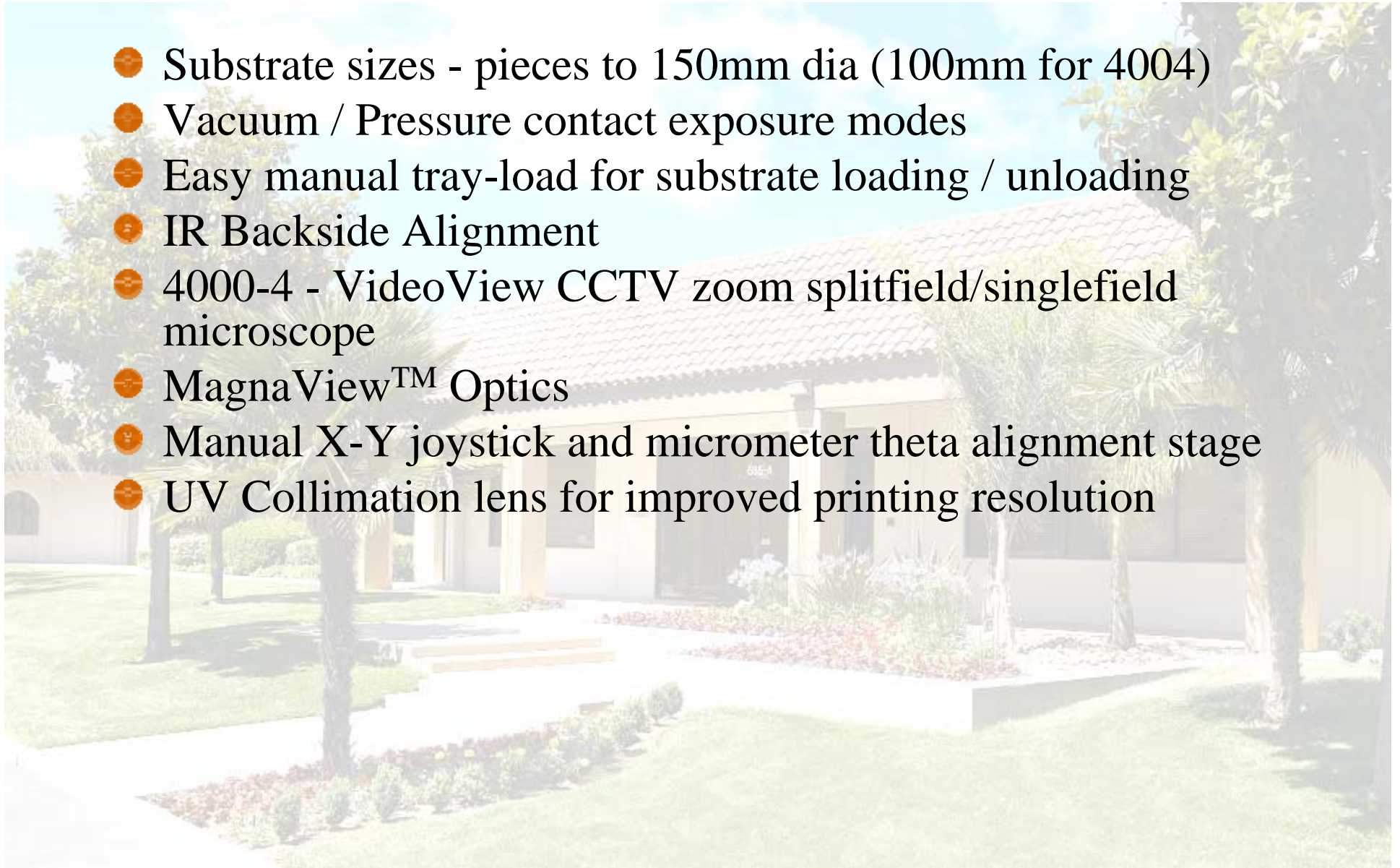
## **4004/4006 Installation footprint**

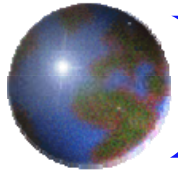




# 4000 Series Features

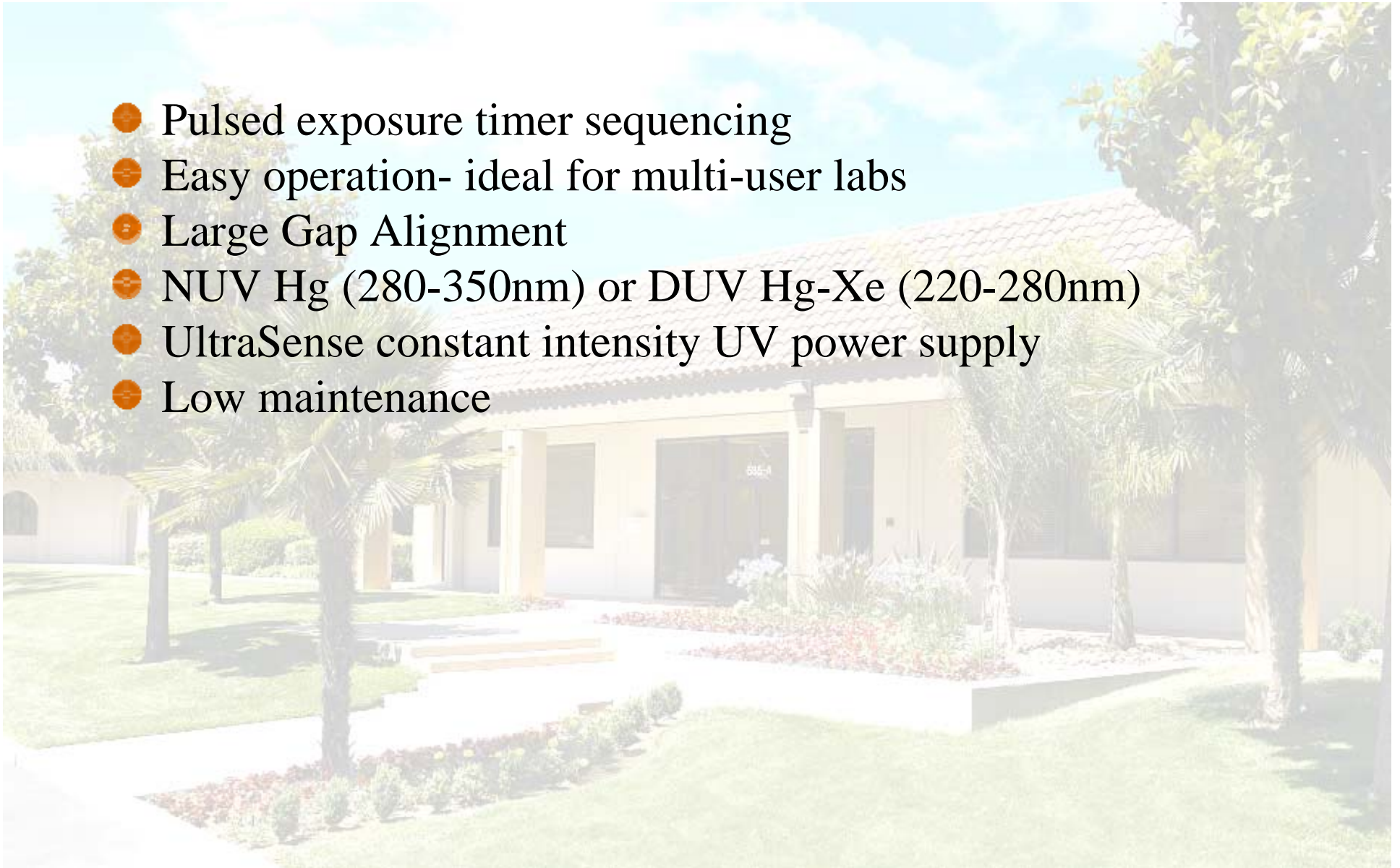
- Substrate sizes - pieces to 150mm dia (100mm for 4004)
- Vacuum / Pressure contact exposure modes
- Easy manual tray-load for substrate loading / unloading
- IR Backside Alignment
- 4000-4 - VideoView CCTV zoom splitfield/singlefield microscope
- MagnaView™ Optics
- Manual X-Y joystick and micrometer theta alignment stage
- UV Collimation lens for improved printing resolution

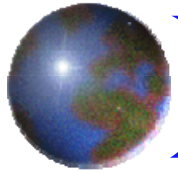




# 4000 Series Features

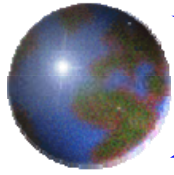
- Pulsed exposure timer sequencing
- Easy operation- ideal for multi-user labs
- Large Gap Alignment
- NUV Hg (280-350nm) or DUV Hg-Xe (220-280nm)
- UltraSense constant intensity UV power supply
- Low maintenance





# 4000 Series Specifications

- **Print Modes**
  - Soft, Pressure or Vacuum modes
- **Print Resolution** <1.0 microns (best 0.7 micron)  
(vacuum; process dependent)
- **Substrate size** pieces to 150mm (100 for 4004)
- **Alignment Stage** Motorized Joystick, Micrometers  
Optional
- **Alignment Travel Theta** Manual Micrometer
- **Stage Scan** +/- 10 mm
- **X-Y Movement** +/- 3.8mm
- **Theta Rotation Range** +/- 7 degrees
- **Mask/Wafer separation** 0 – 150 microns
- **Mask Size** 2.5x2.5” up to 7x7 (5x5 for 4004)
- **Top Alignment overlay** < 1.0 microns



# 4000 Series Specifications

- **Bottom IR Alignment Overlay** > 2 microns
- **Electronics**
  - Programming & Control PLC with LCD Display
  - Intuitive operator Interface menu driven operation
- **UV Lamphouse/ UV Exposure Optics**
  - UV Lamphouse 200/350W, 350/500W or 500/1KW (500 max on 4004)
  - Exposure Optics UV (350-450 nm) standard
- **UV Uniformity**
  - +/- 4%, 150mm dia.
  - +/- 5% 200mm dia.